OPTIKA
MICROSCOPES ITALY

Discover what's next

B-800/B-1000

State-of-the-art
Upright Research Microscope

Contact us for information about it...

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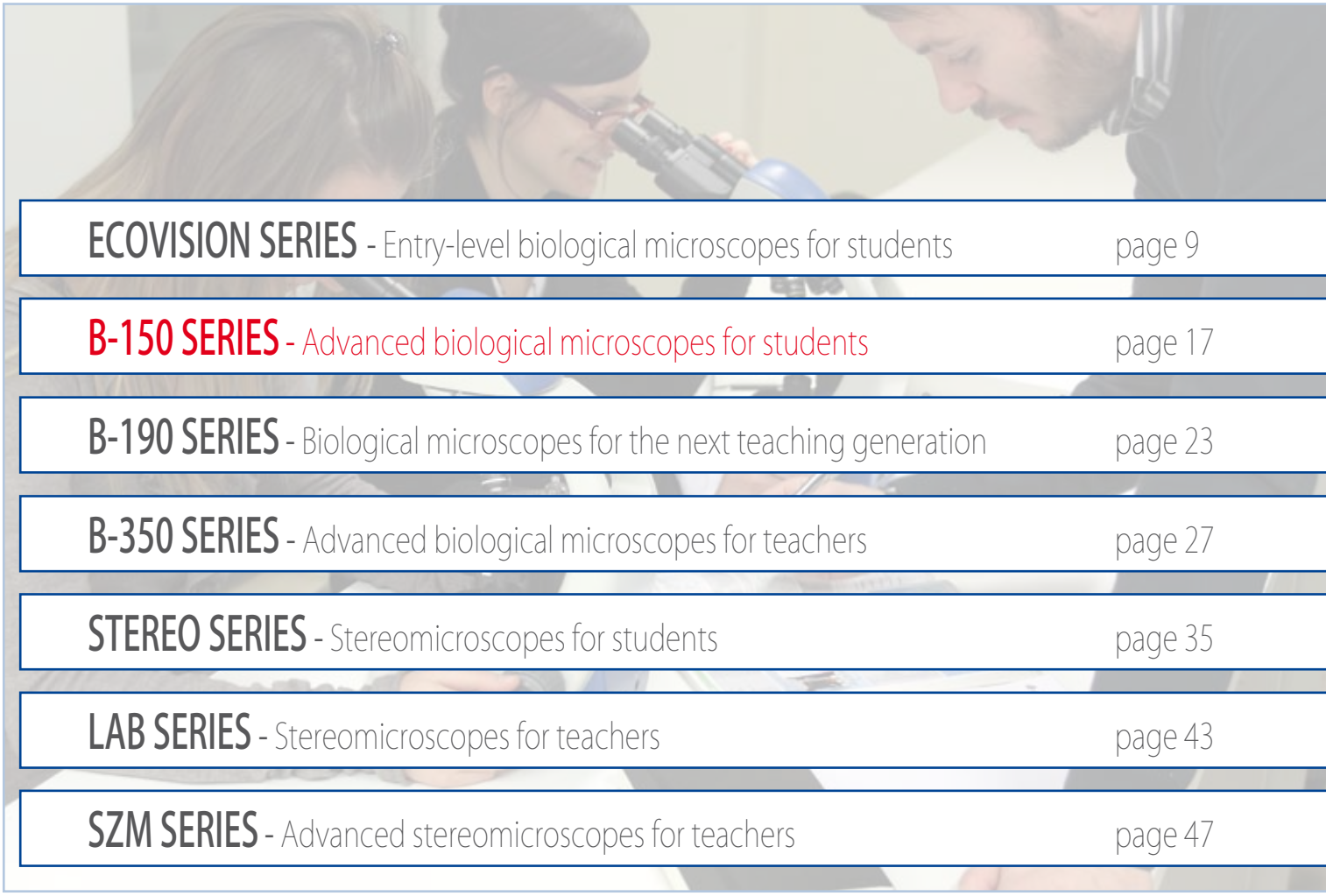
EDUCATIONAL MICROSCOPES

EDUCATIONAL MICROSCOPES



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ECOVISION Series

Entry-level biological microscopes for students

ECOVISION

ECOVISION Series

Monocular biological microscopes designed especially for students attending primary and secondary schools.
The metal structure combines sturdiness and ease of use.
The wide selection of available models allows to choose the most suitable microscope according to the application required.

SFC-3A	Monocular microscope, 400x, mirror.
SFC-3ACase	Monocular microscope, 400x, mirror.
SFC-3AF	Monocular microscope, 400x, mirror, case.
BP-20/400	Monocular microscope, 400x, tungsten lamp.
BP-20/400hal	Monocular microscope, 400x, halogen lamp.
BP-20/600	Monocular microscope, 600x, tungsten lamp.
B-20	Monocular microscope, 400x, LED.
B-20R	Monocular microscope, 400x, LED with rechargeable battery.
B-20 Solar	Monocular microscope, 400x, LED with solar panel.
B-50	Monocular microscope, 400x, LED.
M-100FL	Monocular microscope, 400x, tungsten lamp.
M-100FL-H	Monocular microscope, 400x, halogen lamp.
M-100FLed	Monocular microscope, 400x, LED.

AVAILABLE SOON

B-50

BP-20

ECOVISION Series - Models

SFC-3A

Monocular biological microscope with 400x magnification. Wide Field 10x/18mm eyepiece.
Triple nosepiece rotating in both directions with objective click locking system. Achromatic objectives: 4x, 10x and telescopic 40x.
Coarse focusing system controlled by a pair of knobs located on both sides of the stand.
100x90 mm stage complete with slide clips.
Metal stand, stove enamelled with epoxy powders.
Concave/convex mirror illumination located in the base.

SFC-3ACase

The same configuration as the SFC-3A with an additional plastic case containing a complete series of microscopy accessories.

SFC-3AF

The same configuration as the SFC-3A with an additional pair of knobs for fine focusing, 120x110 mm stage and a larger stand.

SFC-3ACase

SFC-3A

SFC-3AF

ECOVISION Series - Models

BP-20/400

Monocular biological microscope with 400x magnification which can be increased to 960x through an additional 16x eyepiece and a 60x objective.
360° rotating head, with 45° inclined eyepiece tube.
Wide Field 10x/18mm eyepiece.
Triple nosepiece rotating in both directions with objective click locking system.
DIN achromatic objectives: 4x, 10x and telescopic 40x.
Coaxial coarse and fine focusing knobs located on both sides of the stand.
The fine focusing knobs are graduated.
Stage complete with slide clips.
0.65 N.A. condenser with rotating disc diaphragm.
Built-in illuminator with 230V/20W bulb and condensing lens.

BP-20/400hal

The same configuration as BP-20/400, with external power supply and 12V/10W halogen bulb.

BP-20/600

The same configuration as BP-20/400, with 60x objective instead of 40x objective and 600x maximum magnification.

BP-20/400

ECOVISION Series - Models

B-20

Monocular biological microscope with 400x magnification.
360° rotating head, with 45° inclined eyepiece tube.
Wide Field 10x/16mm eyepiece.
Triple nosepiece rotating in both directions with objective click locking system.
Achromatic objectives: 4x, 10x and telescopic 40x.
Separate coarse and fine focusing knobs with different axis, with focus tension adjustment.
Movable round stage, 90 mm diameter, 5 mm moving range, slide clips.
White LED, with brightness control.

B-20R

The same configuration as B-20 with rechargeable battery.

B-20 Solar

Monocular biological microscope with 400x magnification.
Same technical features as B-20.
It is powered by a solar panel, for field use.

B-20/B-20R

B-20 Solar

ECOVISION Series - Models

M-100FL

Monocular biological microscope with 400x magnification which can be increased to 1600x through an additional 16x eyepiece and an 100x objective.
360° rotating head, with 45° inclined eyepiece tube.
Wide Field 10x/18mm eyepiece.
Triple nosepiece revolver rotating in both directions with objectives click locking system.
DIN achromatic objectives: 4x, 10x and telescopic 40x.
Coarse and fine focusing knobs located on both sides of the stand. The fine focusing knobs are graduated.
Stage complete with slide clips;
0.65 N.A. condenser, iris diaphragm and filter holder.
Built-in illuminator with 230V/20W bulb and condensing lens.

M-100FL-H

The same configuration as M-100FL, with built-in 12V/10W halogen illuminator with dichroic bulb. External transformer included.

M-100FLed

Monocular microscope with the same technical specifications as model M-100FL, except for the illumination. Built-in 3-LED illuminator with 3 rechargeable batteries. The illuminator can be used for 24 hours continously without any recharge. Battery charging enabled while using the microscope.
External recharger included.
Battery pack: 3 x AA, 1.2V NiMh, 1000 mAh, replaceable by the user.
Time required for a full recharge: 10 hours.
Battery runtime with LED at maximum power: 12 hours
Battery charging enabled while using the microscope. Performances estimated with batteries at their maximum efficiency.

M-100FL

ECOVISION Series - Technical specifications

Model	Head	Eyepiece	Objectives	Stage	Focusing	Illuminator
SFC-3A	Monocular	WF10x/18mm	Achromatic 4x, 10x, 40x	100x90 mm with sample clips	Coarse control knobs	Mirror
SFC-3ACase	Monocular	WF10x/18mm	Achromatic 4x, 10x, 40x	100x90 mm with sample clips	Coarse control knobs	Mirror
SFC-3AF	Monocular	WF10x/18mm	Achromatic 4x, 10x, 40x	120x110 mm with sample clips	Separate coarse and fine control knobs	Mirror
BP-20/400	Monocular	WF10x/18mm	Achromatic DIN 4x, 10x, 40x	120x110 mm with sample clips	Coaxial coarse and fine control knobs	20W tungsten
BP-20/400hal	Monocular	WF10x/18mm	Achromatic DIN 4x, 10x, 40x	120x110 mm with sample clips	Coaxial coarse and fine control knobs	10W halogen
BP-20/600	Monocular	WF10x/18mm	Achromatic DIN 4x, 10x, 60x	120x110 mm with sample clips	Coaxial coarse and fine control knobs	20W tungsten
B-20	Monocular	WF10x/16mm	Achromatic 4x, 10x, 40x	Movable, 360° rotating, 90mm diameter, with sample clips	Separate coarse and fine control knobs	LED
B-20R	Monocular	WF10x/16mm	Achromatic 4x, 10x, 40x	Movable, 360° rotating, diameter 90mm, with sample clips	Separate coarse and fine control knobs	LED with rechargeable battery
B-20 SOLAR	Monocular	WF10x/16mm	Achromatic 4x, 10x, 40x	Movable, 360° rotating, diameter 90mm, with sample clips	Separate coarse and fine control knobs	LED powered by solar panel
M-100FL	Monocular	WF10x/18mm	Achromatic DIN 4x, 10x, 40x	120x110 mm with sample clips	Separate coarse and fine control knobs	20W tungsten
M-100FL-H	Monocular	WF10x/18mm	Achromatic DIN 4x, 10x, 40x	120x110 mm with sample clips	Separate coarse and fine control knobs	10W halogen
M-100FLed	Monocular	WF10x/18mm	Achromatic DIN 4x, 10x, 40x	120x110 mm with sample clips	Separate coarse and fine control knobs	LED with rechargeable battery

ECOVISION Series - Accessories

SFC-3A - SFC-3ACase - SFC-3AF

M-001	Eyepiece H5x
M-002	Eyepiece WF10x/18mm
M-003	Eyepiece WF16x/12mm
M-004	Eyepiece micrometer WF10x/18mm
M-727	Achromatic objective 4x/0.10 (for SFC-3A and SFC-3ACase)
M-728	Achromatic objective 10x/0.25 (for SFC-3A and SFC-3ACase)
M-729	Achromatic objective 40x/0.65 (for SFC-3A and SFC-3ACase)
M-727.1	Achromatic objective 4x/0.10 (for SFC-3AF)
M-728.1	Achromatic objective 10x/0.2 (for SFC-3AF)
M-729.1	Achromatic objective 40x/0.65 (for SFC-3AF)
M-968	Plane-concave mirror, type 1 (for SFC-3A and SFC-3ACase)
M-969	Plane-concave mirror, type 2 (for SFC-3AF)
M-110	Attachable illuminator 20W/230V (for SFC-3AF)
M-012	Tungsten bulb 20W/230V (for SFC-3AF)
M-030	Dust cover, type 1 (for SFC-3A and SFC-3ACase)
M-015	Dust cover, type 2 (for SFC-3AF)

BP-20/400 - BP-20/400hal - BP-20/600

M-001	Eyepiece H5x
M-002	Eyepiece WF10x/18mm
M-003	Eyepiece WF16x/12mm
M-004	Eyepiece micrometer WF10x/18mm
M-730	Achromatic objective 4x/0.10
M-731	Achromatic objective 10x/0.25
M-732	Achromatic objective 20x/0.40
M-733	Achromatic objective 40x/0.65
M-734	Achromatic objective 60x/0.80
M-040	Attachable mechanical stage
M-099	Polarising set (filters and rotating table)
M-012	Tungsten bulb 20W/230V
M-970	Plane-concave mirror, with base, type 3
M-015	Dust cover, type 2

B-20 - B-20R - B-20 Solar

M-044	Eyepiece WF10x/16mm
M-727	Achromatic objective 4x/0.10
M-728	Achromatic objective 10x/0.25
M-729	Achromatic objective 40x/0.65
M-030	Dust cover, type 1

M-100FL - M-100FL-H - M-100FLed

M-001	Eyepiece H5x
M-002	Eyepiece WF10x/18mm
M-003	Eyepiece WF16x/12mm
M-004	Eyepiece micrometer WF10x/18mm
M-131	Achromatic objective 4x/0.10
M-132	Achromatic objective 10x/0.25
M-133	Achromatic objective 20x/0.40
M-134	Achromatic objective 40x/0.65
M-135	Achromatic objective 60x/0.80
M-136	Achromatic objective 100x/1.25 (oil)
M-040	Attachable mechanical stage
M-099	Polarising set (filters and rotating table)
M-012	Tungsten bulb 20W/230V
M-013	Halogen bulb 12V/10 W, with dichroic mirror
M-971	Plane-concave mirror, with base, type 4
M-015	Dust cover, type 2
M-069	Solar battery pack for M-100FLed

Solar battery pack

Included battery: rechargeable – Lithium-Poly. Capacity: 2000 mAh.
Output voltage: 5,5Vdc. Dimensions: 110x60x15 mm. Autonomy: 7h at max intensity.
Charging modes: with solar panel (12h) - with included power supply (6h).

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Alpha Optika Microscopes Hungary
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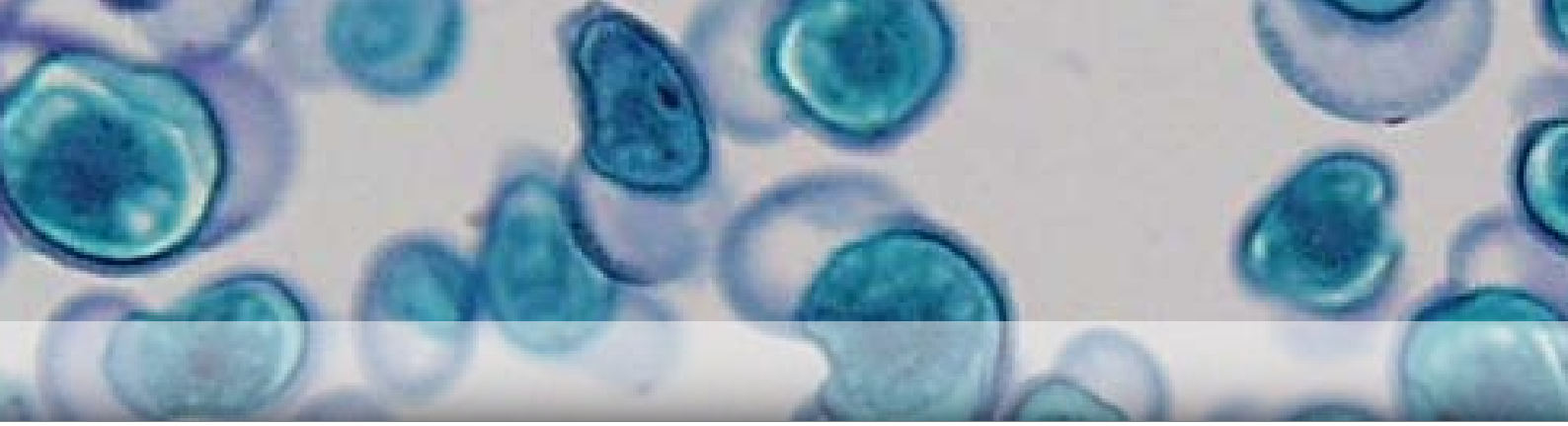
B-150 Series

Advanced biological microscopes for students

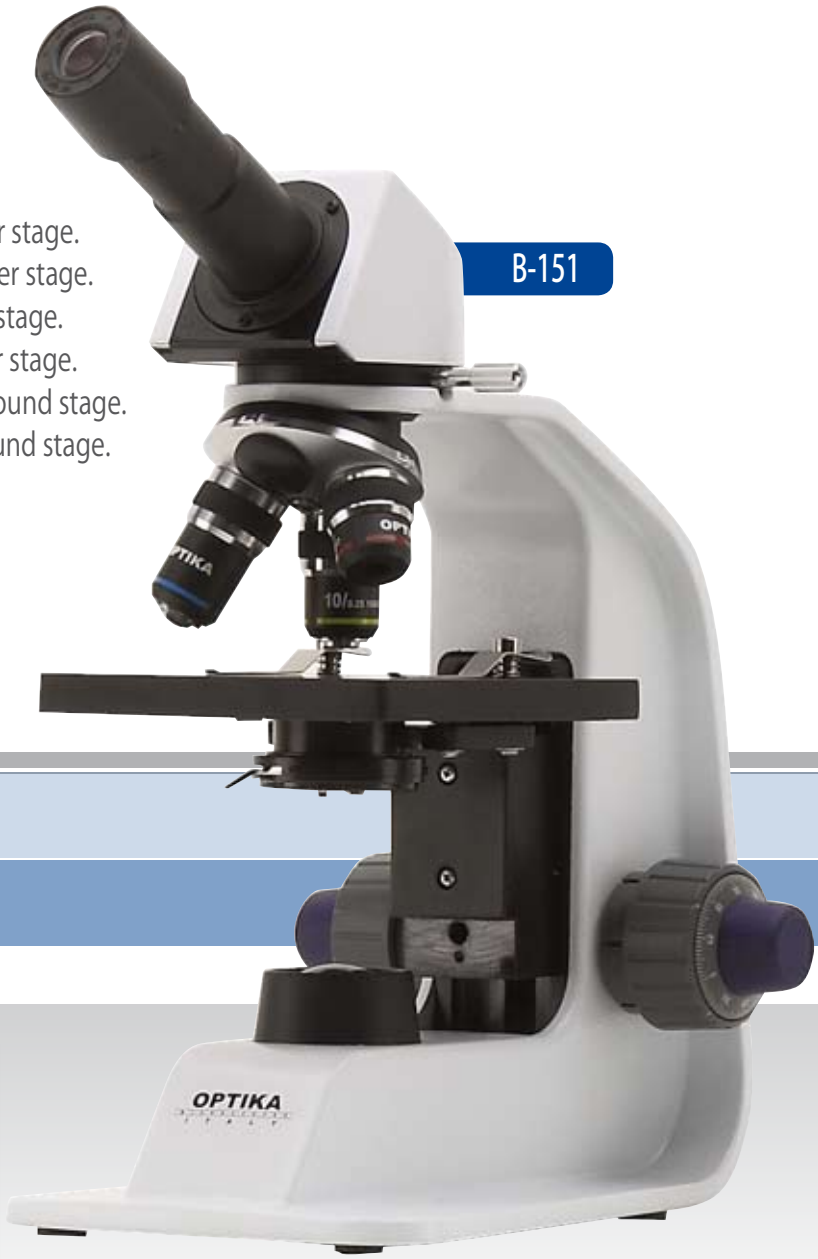
B-150



B-150 Series

The B-150 series has been designed to fulfill all requirements of educational laboratories.
The available models allow a pleasant and effective approach to the world of microscopy.
The quality of the optics, the reliability of the mechanical parts and the excellent price/quality ratio rank these instruments at the top of their category.

B-151	Monocular microscope, 400x, fixed stage.
B-153	Monocular microscope, 600x, double layer stage.
B-155	Monocular microscope, 1000x, double layer stage.
B-157	Binocular microscope, 600x, double layer stage.
B-159	Binocular microscope, 1000x, double layer stage.
B-150POL-M	Monocular polarizing microscope, 400x, round stage.
B-150POL-B	Binocular polarizing microscope, 400x, round stage.



B-150 Series

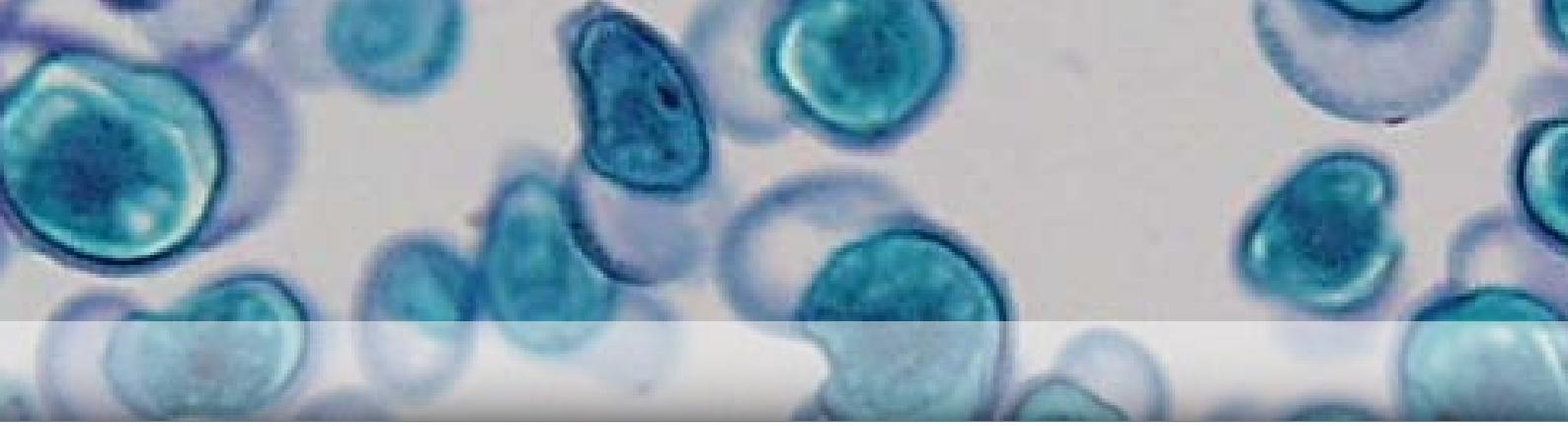
Heads
Binocular observation head, 30° inclined and 360° rotatable.
Interpupillary adjustment 48-75 mm.
Diopter adjustment on the left eyepiece.
Monocular observation head, 30° inclined and 360° rotatable.

Focusing
Coaxial coarse and fine focusing mechanism (graduation: 0.002mm) with limit stop to prevent the contact between objective and specimen.
Adjustable tension of coarse focusing knob.

Specimen stages
Double layer mechanical sliding stage, 125x116mm, 76x30mm X-Y movement range.
Specimen holder for one slide.
Vernier scale on the two axes, accuracy: 0,1mm.
B-151: plain stage, 125X120mm.
B150POL-M and B-150POL-B: rotatable round stage, 120mm diameter.

Illumination
Light source type: white LED; light intensity controlled by a knob on the left side of the base.
LED power: 1W.
Color temperature: 6300K
LED average lifetime: approx. 50.000h
External power supply: 100/240Vac, 50/60Hz. Output: 5Vdc, 500mA.

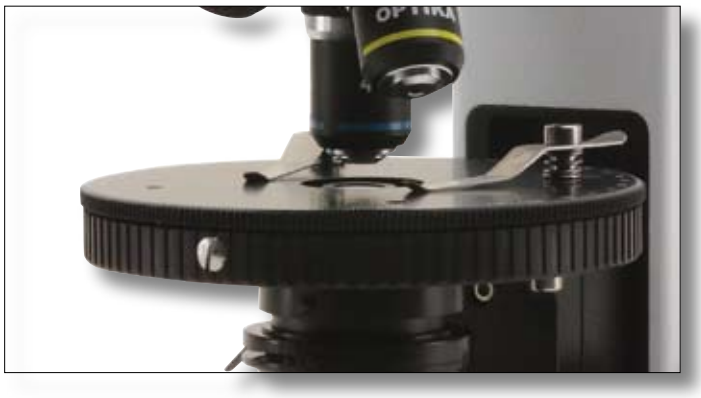
Condenser
Abbe condenser, 1.2 N.A., precentered.
B-151: Abbe condenser 0.65 N.A., precentered.
B150POL-M and B-150POL-B: 1.2 N.A. fixed condenser.



B-150 Series

Polarizing models

Microscopes designed for simple polarization analysis.
Available in monocular and binocular versions.
The two models are equipped with a swing-out polarizer and a slide-out analyzer as well as a rotating table.
B-150POL-M and B-150POL-B are suitable for common observations with polarized light in the educational field.



B-150POL-M

B-150POL-B

B-150 Series - Technical specifications

Model	Head	Eyepiece	Objectives	Stage	Condenser	Focusing system	Illuminator
B-151	Monocular	WF10x/18mm	Achromatic 4X/10X/40X	Plain stage, 125x120mm with sample clips	0.65 N.A. with diaphragm	Coaxial coarse and fine focusing mechanism with limit stop	1W LED with external power supply
B-153	Monocular	WF10x/18mm	Achromatic 4X/10X/40X/60X	Mechanical stage, 125x116mm with specimen holder	1.2 N.A. with diaphragm	Coaxial coarse and fine focusing mechanism with limit stop	1W LED with external power supply
B-155	Monocular	WF10x/18mm	Achromatic 4X/10X/40X/100X	Mechanical stage, 125x116mm with specimen holder	1.2 N.A. with diaphragm	Coaxial coarse and fine focusing mechanism with limit stop	1W LED with external power supply
B-157	Binocular	WF10x/18mm	Achromatic 4X/10X/40X/60X	Mechanical stage, 125x116mm with specimen holder	1.2 N.A. with diaphragm	Coaxial coarse and fine focusing mechanism with limit stop	1W LED with external power supply
B-159	Binocular	WF10x/18mm	DIN Achromatic 4X/10X/40X/100X	Mechanical stage, 125x116mm with specimen holder	1.2 N.A. with diaphragm	Coaxial coarse and fine focusing mechanism with limit stop	1W LED with external power supply
B-150POL-M	Monocular	WF10x/18mm	DIN Achromatic 4X/10X/40X	Rotatable stage, 120mm diameter	1.2 N.A. with diaphragm	Coaxial coarse and fine focusing mechanism with limit stop	1W LED with external power supply. Rotatable swing-out polarizer, slide-out analyzer
B-150POL-B	Binocular	WF10x/18mm	DIN Achromatic 4X/10X/40X	Rotatable stage, 120mm diameter	1.2 N.A. with diaphragm	Coaxial coarse and fine focusing mechanism with limit stop	1W LED with external power supply. Rotatable swing-out polarizer, slide-out analyzer

B-150 Series - Accessories

M-001	Eyepiece H5x
M-002.1	Eyepiece WF10x/18mm
M-003	Eyepiece WF16x/12mm eyepiece
M-004	Eyepiece micrometer WF10x/18mm
M-137	Achromatic objective 4x/0.10
M-138	Achromatic objective 10x/0.25
M-139	Achromatic objective 20x/0.40
M-141	Achromatic objective 40x/0.65
M-142	Achromatic objective 60x/0.85
M-143	Achromatic objective 100x/1.25 (oil)
M-040	Attachable mechanical stage
M-155	Polarising set (filters only)
M-031	Dust cover, type 3
M-069	Solar battery pack

Solar battery pack

Included battery: rechargeable – Lithium-Poly. Capacity: 2000 mAh.
Output voltage: 5,5Vdc. Dimensions: 110x60x15 mm. Autonomy: 7h at max intensity.
Charging modes: with solar panel (12h) - with included power supply (6h).

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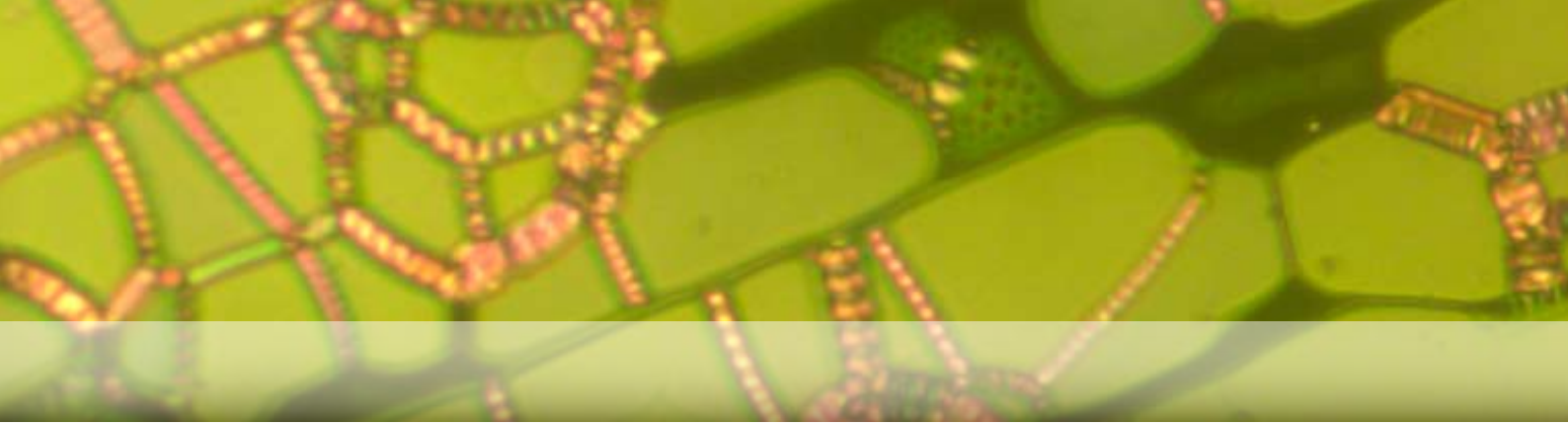
B-190 Series

Biological microscopes for the next teaching generation

X-LED 2 TM

B-190



B-190 Series

The B-190 series is the result of a perfect fusion between years of experience in the microscopy field and a refined design study. This series represents our product philosophy at its best: quality, reliability and innovation. The B-190 series is the answer of OPTIKA Microscopes to the challenge of the future in the teaching field.

B-191	Monocular microscope, 1000x.
B-191s	Monocular microscope, 600x.
B-192	Binocular microscope, 1000x.
B-192s	Binocular microscope, 600x.
B-192PLi	Binocular microscope, 1000x, IOS.
B-193	Trinocular microscope, 1000x.

Optical system

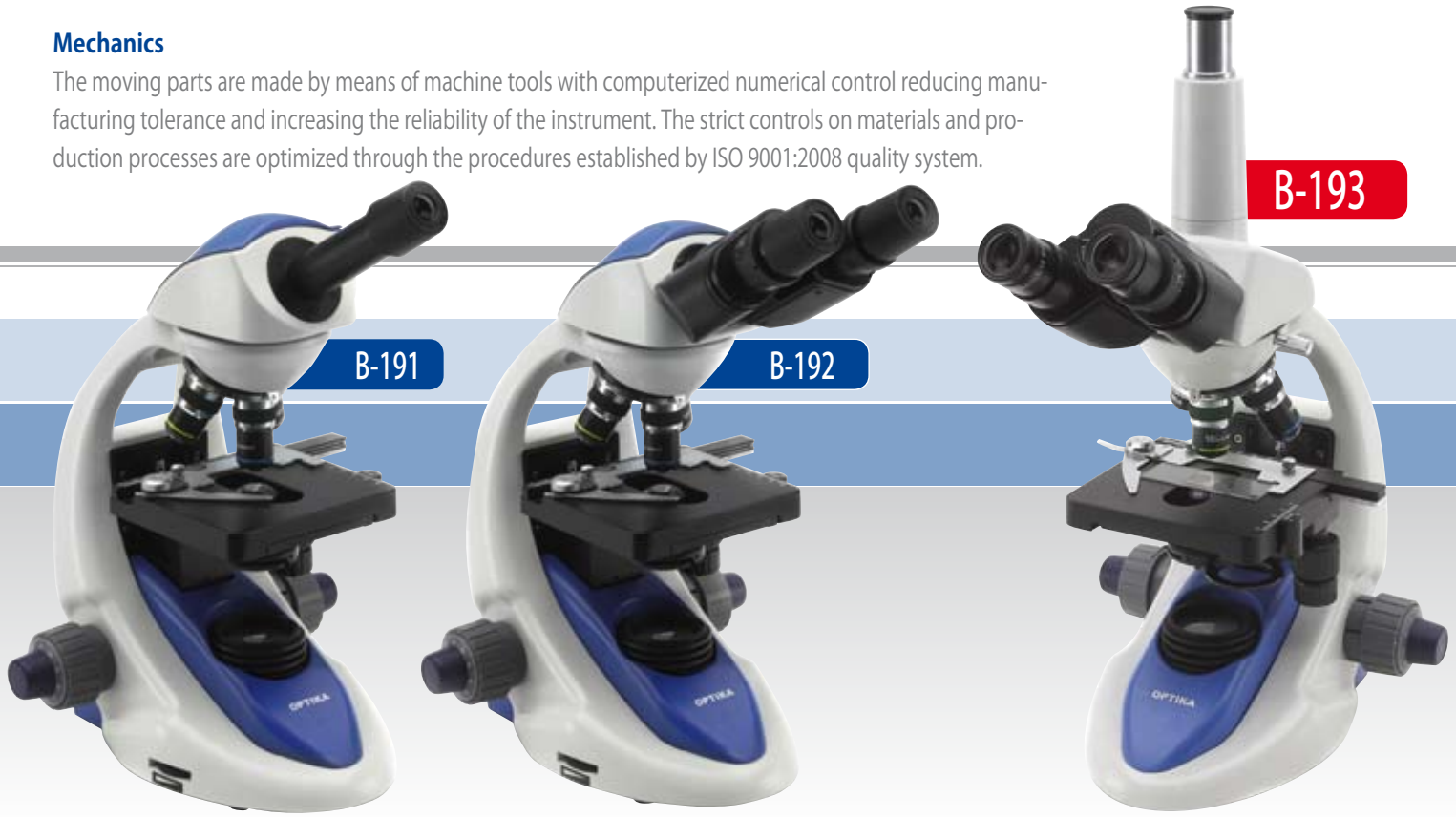
The optical system has been developed for demanding users; it consists of high quality components which guarantees an high image contrast and an excellent optical resolution. The optical components have been designed and treated with special techniques to prevent the formation of moulds and fungi.

Stand

The stand has a modern and ergonomic design. It is easy to carry the microscope thanks to the large opening behind the revolving nosepiece, to be used as a handle. The opening allows the user to see clearly the objectives and the samples, as requested in discussion groups.

Mechanics

The moving parts are made by means of machine tools with computerized numerical control reducing manufacturing tolerance and increasing the reliability of the instrument. The strict controls on materials and production processes are optimized through the procedures established by ISO 9001:2008 quality system.

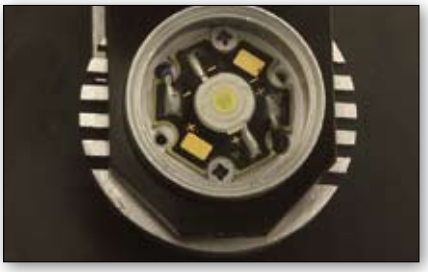


B-190 Series

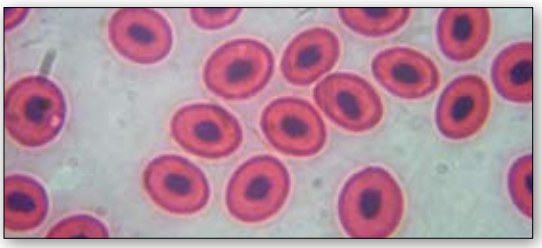
Illumination

X-LED²™ - The future of illumination

The X-LED²™ powered illumination system has been developed by our R&D dept. and consists of a combination of LED and optical technology. A high-efficiency single chip LED improved by a special optical system doubles the light intensity generated by an ordinary LED. The resulting light is comparable to the light generated by a 30W halogen lamp but with a colour temperature of 6300K: this means a white light instead of the yellow one produced by filament lamps. The electric consumption (3W only) proves the high efficiency of this system: the same light intensity with less consumption; 10% of an ordinary 30W halogen lamp's consumption.
In addition, the lifetime of the LED is 50.000 hours instead of the 1.500 hours of an ordinary halogen lamp.



Frog, blood smear
Real picture taken from B-192 with 100x objective
without immersion oil



B-190 Series - Technical specifications

Model	Head	Eyepiece(s)	Nosepiece	Objectives	Stage	Focusing	Illuminator	Condenser	Power supply
B-191	Monocular, 360° rotating, 30° inclined	Wide Field 10x/18mm	Quadruple, reversed	DIN Achromatic 4x/0.10, 10x/0.25, 40x/0.65, 100x/1.25	Double layer, 125x115 mm with X-Y 70x30mm moving range	Coaxial coarse and fine focusing	X-LED² system with adjustable intensity	1.25 N.A. Abbe type with adjustable height and iris diaphragm	100-240 Vac 50-60 Hz external power adapter 7,5Vdc output
B-191s	Monocular, 360° rotating, 30° inclined	Wide Field 10x/18mm	Quadruple, reversed	DIN Achromatic 4x/0.10, 10x/0.25, 40x/0.65, 60x/0.85	Double layer, 125x115 mm with X-Y 70x30mm moving range	Coaxial coarse and fine focusing	X-LED² system with adjustable intensity	1.25 N.A. Abbe type with adjustable height and iris diaphragm	100-240 Vac 50-60 Hz external power adapter 7,5Vdc output
B-192	Binocular 360° rotating, 30° inclined with adjustable interpupillary distance and dioptric compensation	Wide Field 10x/18mm	Quadruple, reversed	DIN Achromatic 4x/0.10, 10x/0.25, 40x/0.65, 100x/1.25	Double layer, 125x115 mm with X-Y 70x30mm moving range	Coaxial coarse and fine focusing	X-LED² system with adjustable intensity	1.25 N.A. Abbe type with adjustable height and iris diaphragm	100-240 Vac 50-60 Hz external power adapter 7,5 Vdc output
B-192s	Binocular 360° rotating, 30° inclined with adjustable interpupillary distance and dioptric compensation	Wide Field 10x/18mm	Quadruple, reversed	DIN Achromatic 4x/0.10, 10x/0.25, 40x/0.65, 60x/0.85	Double layer, 125x115 mm with X-Y 70x30mm moving range	Coaxial coarse and fine focusing	X-LED² system with adjustable intensity	1.25 N.A. Abbe type with adjustable height and iris diaphragm	100-240 Vac 50-60 Hz external power adapter 7,5 Vdc output
B-192PLi	Binocular 360° rotating, 30° inclined with adjustable interpupillary distance and dioptric compensation	Wide Field 10x/18mm	Quadruple, reversed	Infinity Corrected DIN E-Plan 4x/0.10, 10x/0.25, 40x/0.65, 100x/1.25	Double layer, 125x115 mm with X-Y 70x30mm moving range	Coaxial coarse and fine focusing	X-LED² system with adjustable intensity	1.25 N.A. Abbe type with adjustable height and iris diaphragm	100-240 Vac 50-60 Hz external power adapter 7,5 Vdc output
B-193	Trinocular 360° rotating, 30° inclined with adjustable interpupillary distance and dioptric compensation	Wide Field 10x/18mm	Quadruple, reversed	DIN Achromatic 4x/0.10, 10x/0.25, 40x/0.65, 100x/1.25	Double layer, 125x115 mm with X-Y 70x30mm moving range	Coaxial coarse and fine focusing	X-LED² system with adjustable intensity	1.25 N.A. Abbe type with adjustable height and iris diaphragm	100-240 Vac 50-60 Hz external power adapter 7,5 Vdc output

B-190 Series - Accessories

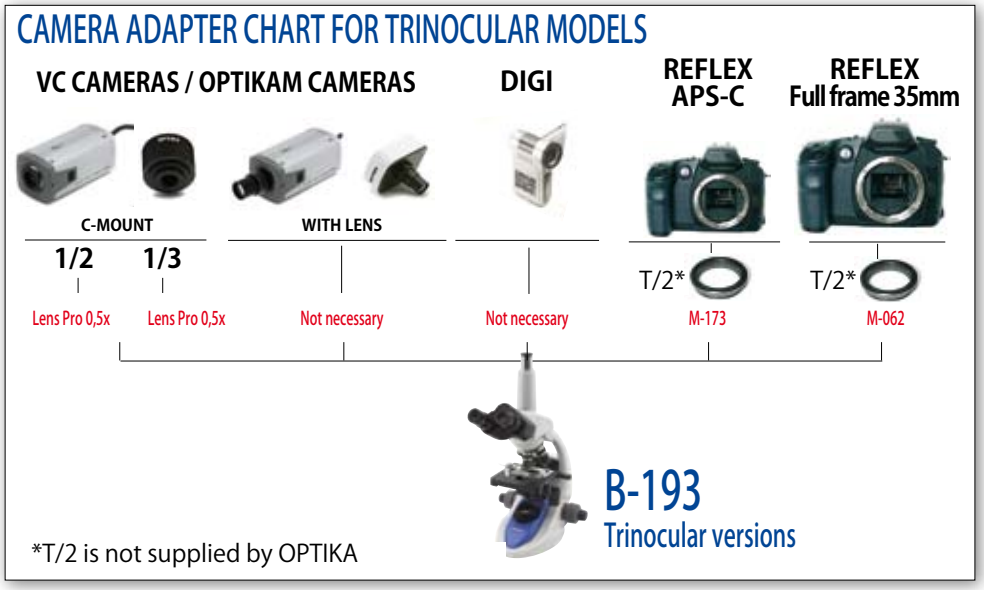
M-001	Eyepiece H5x
M-002.1	Eyepiece WF10x/18mm
M-003	Eyepiece WF16x/12mm
M-004	Eyepiece micrometer WF10x/18mm m
M-137	Achromatic objective 4x/0.10
M-138	Achromatic objective 10x/0.25
M-139	Achromatic objective 20x/0.40
M-141	Achromatic objective 40x/0.65
M-142	Achromatic objective 60x/0.85
M-143	Achromatic objective 100x/1.25 (oil)
M-190	Polarising set (filters only)
M-031	Dust cover, type 3
M-144	Objective E PLAN ios 4X
M-145	Objective E PLAN ios 10X
M-146	Objective E PLAN ios 20X
M-147	Objective E PLAN ios 40X
M-148	Objective E PLAN ios 100X
M-069	Solar battery pack
M-114	CCD camera adapter, 0.5x
M-173	Photo tube adapter for APS-C sensor
M-365	Photo tube adapter for full frame sensor

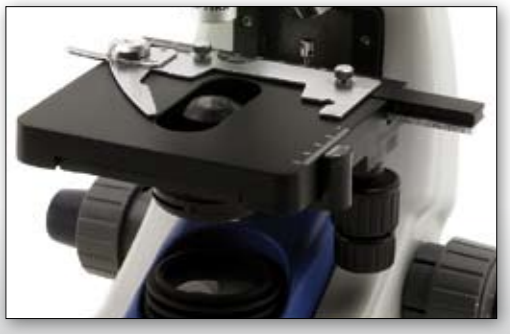
Solar battery pack

Included battery: rechargeable – Lithium-Poly. Capacity: 2000 mAh. Output voltage: 5,5Vdc.
Dimensions: 110x60x15 mm. Autonomy: 5h at max intensity.
Charging modes: with solar panel (12h) - with included power supply (6h).

B-192 Powered by solar battery pack (M-069)

CAMERA ADAPTER CHART FOR TRINOCULAR MODELS





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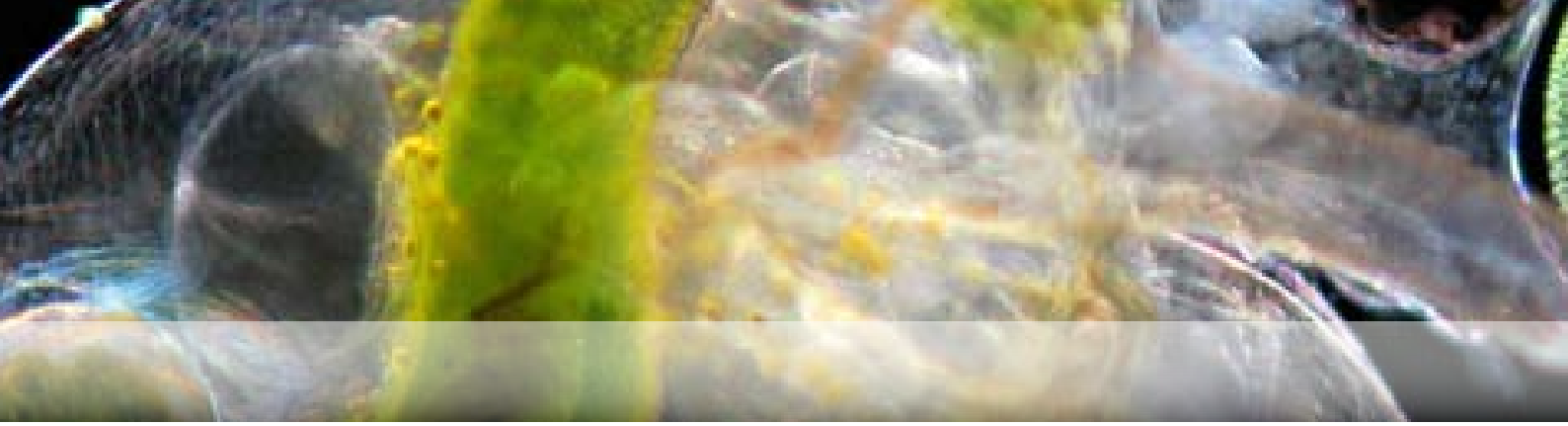
B-350 Series

Advanced biological microscopes for teachers

X-LED™

B-350

IOS™ objectives



B-350 Series

The B-350 series presents the right balance between price and quality.
Thanks to its wide range of models, it can be successfully used both in advanced teaching situations and in laboratories.
Professional users will certainly value the technical features of the B-350 series that make its high quality microscopes resistant and reliable. The B-350 series includes 8 models featuring achromatic, planachromatic and infinity corrected plan achromatic objectives.
Let's take a closer look to each model:

B-352A	Binocular microscope, achromatic objectives.
B-353A	Trinocular microscope, achromatic objectives.
B-352PL	Binocular microscope, planachromatic objectives.
B-353PL	Trinocular microscope, planachromatic objectives.
B-352PLi	Binocular microscope, infinity corrected E-planachromatic objectives.
B-353PLi	Trinocular microscope, infinity corrected E-planachromatic objectives.
B-352Ph	Binocular microscope, Ph planachromatic objectives.
B-353Ph	Trinocular microscope, Ph planachromatic objectives.

Standard LED

X-LED™

X-LED™ - The future of illumination

OPTIKA is proud to introduce its own revolutionary LED powered illumination system. Developed by our R&D dept. it consists of a new combination of LED and optical technology. A new high-efficiency single chip LED works in combination with a special optical lens, which allows to double the intensity of the light generated by the LED itself. The result is a quantity of light equivalent to the light generated by a standard 30-35W halogen bulb, but with a colour temperature of 6300K. It means white light instead of the yellow one produced by halogen bulbs.
The electrical consumption (3.6W only) shows the high efficiency of the system: same light intensity with less than 10% of the consumption of a standard halogen bulb. Last but not least, the lifetime of our LED is 50.000 hours, instead of 1.500 hours ...!

B-350 Series

Optical system & objectives

The models of the B-350 series are equipped, depending on the various models, with two different types of optical system: the standard 160mm one and the infinity corrected system (IOS). In both cases the field diameter of the eyepieces is 20mm.

Microscope stand

Modern and ergonomic, this stand is made of die-cast aluminium. Coarse and fine focusing (graduation: 0.002mm) with coaxial control knobs.
Adjustable focusing tension and limit stop.

Head

Available in binocular or trinocular version.
The heads are equipped with interpupillary distance control (55-75 mm) as well as with dioptric compensation.
All heads are 360° rotatable and 30° inclined.

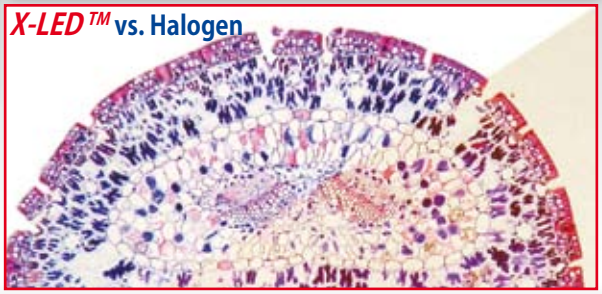
Illumination

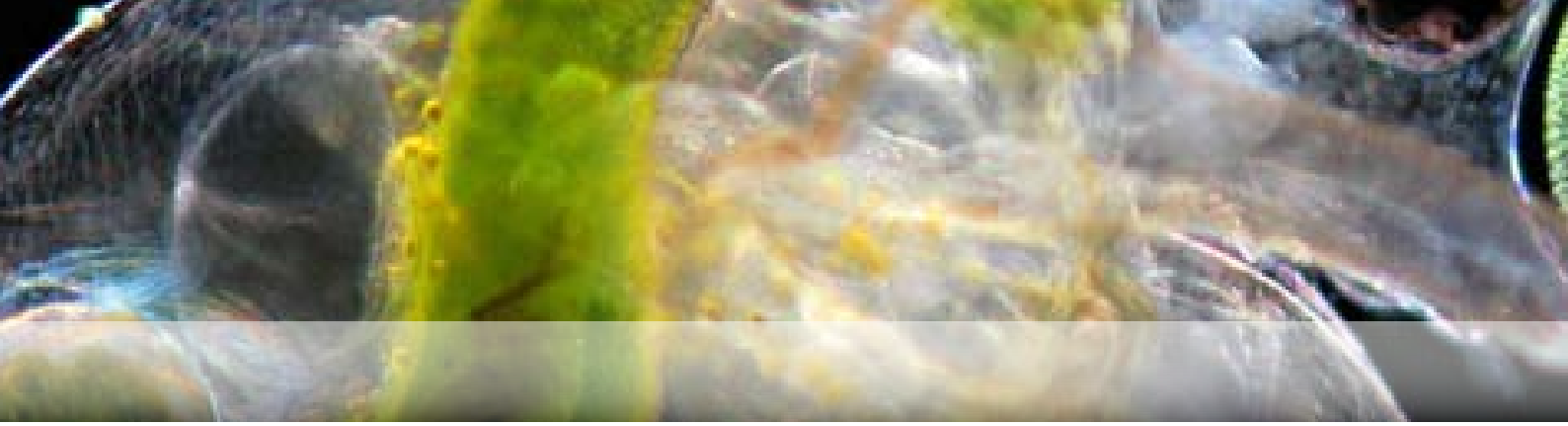
The illuminating system consists of X-LED source. The brightness can be adjusted by a rheostat located on the right side of the microscope base.

Condenser

An Abbe type condenser is included in the package. It can be centred through a double-control system and adjusted in height through a rack-and-pinion mechanism (control knobs located on both sides of the microscope stand).
The condenser is also fitted with an iris diaphragm whose aperture can be adjusted by a graduated reference scale.

Frog, blood smear. Real picture taken from B-353PLi with 100x objective without immersion oil





B-350 Series - Models

B-353PL

Quintuple nosepiece
4x 10x 40x 100x
Plan achromatic objectives

B-350 Series - Models

B-353PLi

Quintuple nosepiece
4x 10x 40x 100x
Plan achromatic IOS objectives

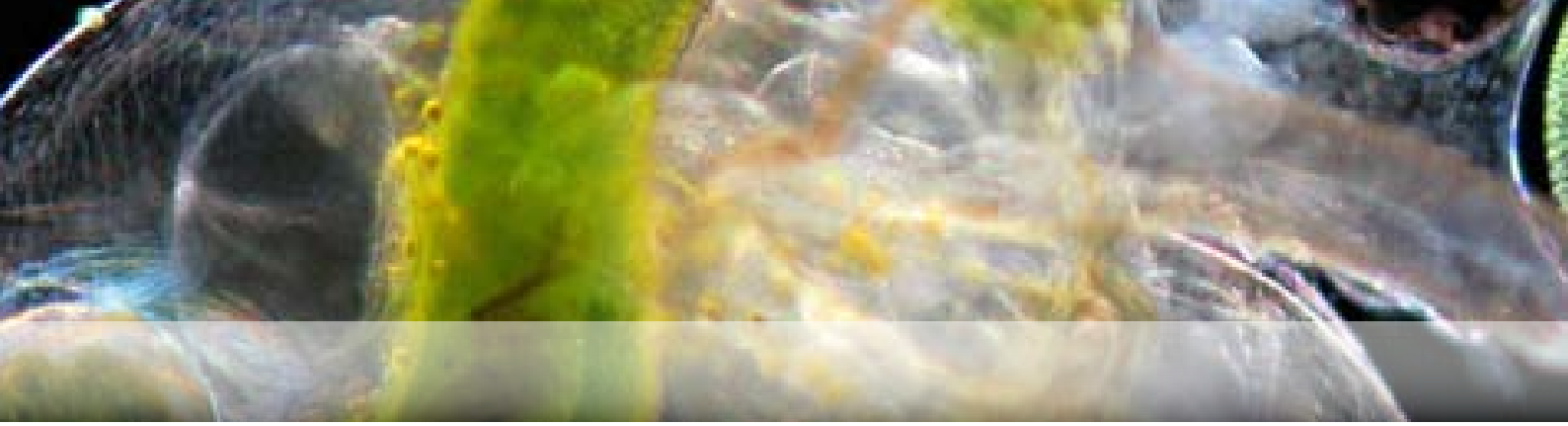
X-LED™

IOS™ objectives

B-353Ph

Quintuple nosepiece
4x 10xPh 40xPh 100xPh
Plan achromatic objectives

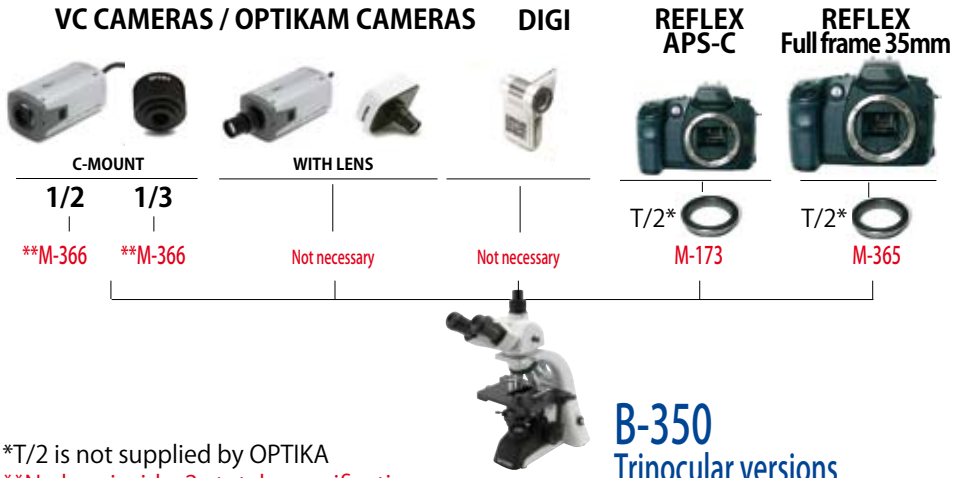
X-LED™



B-350 Series - Photo-video applications

The B-350 series is compatible with our Optikam and DIGI cameras.
For T-mount (reflex) and C-mount cameras, specific adapters are available.

CAMERA ADAPTER CHART FOR TRINOCULAR MODELS



*T/2 is not supplied by OPTIKA
**No lens inside, 2x total magnification

B-350
Trinocular versions

B-350 Series - Technical specifications

Model	Head	Eyepieces	Objectives	Nosepiece	Stage	Focusing	Condenser	Illuminator
B-352A	Binocular 360°rotating 30° inclined	Wide Field 10X / 20 mm	Achromatic 4x, 10x, 40x, 100x (oil)	Quadruple nosepiece, reversed	Double layer mechanical sliding stage, 160x142mm, moving range 76x52mm	Coaxial coarse and fine system, with limit stop	1.25 N.A. Abbe type, with centring system	*X-LED™*, with brightness control
B-353A	Trinocular 360°rotating 30° inclined	Wide Field 10X / 20 mm	Achromatic 4x, 10x, 40x, 100x (oil)	Quadruple nosepiece, reversed	Double layer mechanical sliding stage, 160x142mm, moving range 76x52mm	Coaxial coarse and fine system, with limit stop	1.25 N.A. Abbe type, with centring system	*X-LED™*, with brightness control
B-352PL	Binocular 360°rotating 30° inclined	Wide Field 10X / 20 mm	Plan Achromatic 4x, 10x, 40x, 100x (oil)	Quintuple nosepiece, reversed	Double layer mechanical sliding stage, 160x142mm, moving range 76x52mm	Coaxial coarse and fine system, with limit stop	1.25 N.A., Abbe type, with centring system	*X-LED™*, with brightness control
B-353PL	Trinocular 360°rotating 30° inclined	Wide Field 10X / 20 mm	Plan Achromatic 4x, 10x, 40x, 100x (oil)	Quintuple nosepiece, reversed	Double layer mechanical sliding stage, 160x142mm, moving range 76x52mm	Coaxial coarse and fine system, with limit stop	1.25 N.A., Abbe type, with centring system	*X-LED™*, with brightness control
B-352PLi	Binocular 360°rotating 30° inclined	Wide Field 10X / 20 mm	Plan Achromatic IOS 4x, 10x, 40x, 100x (oil)	Quintuple nosepiece, reversed	Double layer mechanical sliding stage, 160x142mm, moving range 76x52mm	Coaxial coarse and fine system, with limit stop	1.25 N.A., Abbe type, with centring system	*X-LED™*, with brightness control
B-353PLi	Trinocular 360°rotating 30° inclined	Wide Field 10X / 20 mm	Plan Achromatic IOS 4x, 10x, 40x, 100x (oil)	Quintuple nosepiece, reversed	Double layer mechanical sliding stage, 160x142mm, moving range 76x52mm	Coaxial coarse and fine system, with limit stop	1.25 N.A., Abbe type, with centring system	*X-LED™*, with brightness control
B-352Ph	Binocular 360°rotating 30° inclined	Wide Field 10X / 20 mm	Plan Achromatic 4x, 10xPh, 40xPh, 100xPh (oil)	Quintuple nosepiece, reversed	Double layer mechanical sliding stage, 160x142mm, moving range 76x52mm	Coaxial coarse and fine system, with limit stop	Phase condenser (10x, 40x, 100x) with darkfield (dry) and brightfield	*X-LED™*, with brightness control
B-353Ph	Trinocular 360°rotating 30° inclined	Wide Field 10X / 20 mm	Plan Achromatic 4x, 10xPh, 40xPh, 100xPh (oil)	Quintuple nosepiece, reversed	Double layer mechanical sliding stage, 160x142mm, moving range 76x52mm	Coaxial coarse and fine system, with limit stop	Phase condenser (10x, 40x, 100x) with darkfield (dry) and brightfield	*X-LED™*, with brightness control

B-350 Series - Accessories

M-301	Eyepiece high-point WF10x/20mm
M-302	Eyepiece high-point WF16x/12mm
M-303	Eyepiece micrometer high-point WF10x/20mm
M-005	Micrometric slide 26x76 mm. Range: 1mm, div.: 0,01mm
M-310	Objective achromatic 4x/0.10
M-311	Objective achromatic 10x/0.25
M-312	Objective achromatic 20x/0.40
M-313	Objective achromatic 40x/0.65
M-314	Objective achromatic 60x/0.80
M-315	Objective achromatic 100x/1.25 (oil)
M-320	Objective planachromatic 4x/0.10
M-321	Objective planachromatic 10x/0.25
M-322	Objective planachromatic 20x/0.40
M-323	Objective planachromatic 40x/0.65
M-324	Objective planachromatic 60x/0.80
M-325	Objective planachromatic 100x/1.25 (oil)
M-330	Objective IOS planachromatic 4x/0.10
M-331	Objective IOS planachromatic 10x/0.25
M-332	Objective IOS planachromatic 20x/0.40
M-333	Objective IOS planachromatic 40x/0.65
M-334	Objective IOS planachromatic 100x/1.25 (oil)
M-340	Objective planachromatic for phase contrast 10x/0.10
M-341	Objective planachromatic for phase contrast 40x/0.65
M-342	Objective planachromatic for phase contrast 100x/1.25(oil)
M-350	Objective IOS planachromatic for phase contrast 10x/0.25
M-351	Objective IOS planachromatic for phase contrast 20x/0.40
M-352	Objective IOS planachromatic for phase contrast 40x/0.65
M-353	Objective IOS planachromatic for phase contrast 100x/1.25 (oil)

M-360	Complete phase contrast set with PLAN obj. 10x, 40x, 100x, with darkfield condenser for dry objectives
M-361	Complete phase contrast set with IOS E-PLAN obj. 10x, 20x, 40x, 100x
M-362	Polarizing set (filters only)
M-363	Rotating table for polarizing set
M-364	Darkfield condenser for dry objectives
M-173	Photo tube adapter for APS-C sensor
M-365	Photo tube adapter for full frame sensor
M-366	CCD camera adapter
M-031	Dust cover type 3
M-974	Blue filter, 32mm diameter
M-976	Green filter, 32mm diameter
M-978	Yellow filter, 32mm diameter
M-988	Frosted glass filter, 32mm diameter
M-069	Solar battery pack
M-666	Heating stage, with digital temperature controller

Solar battery pack

Included battery: rechargeable – Lithium-Poly. Capacity: 2000 mAh. Output voltage: 5,5Vdc. Dimensions: 110x60x15 mm. Autonomy: 2,5h at max intensity. Charging modes: with solar panel (12h) - with included power supply (6h).

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STEREO Series

Stereomicroscopes for students

STEREO

STEREO Series

This series includes a wide selection of stereomicroscopes range designed to satisfy every need in both teaching and amateur fields.
The whole range, from MS-2 to ST-50, is assembled according to the best technical standards. The optical system, thanks to its transparency, quality and depth, is at the top of its category.
The series is composed of 17 models, each one designed to satisfy multiple needs.

MS-2	Monoscope
STX	Binocular stereomicroscope, LED incident illumination
S-10-P	Binocular stereomicroscope
S-10-L	Binocular stereomicroscope, tungsten incident illumination
S-10-2L	Binocular stereomicroscope, tungsten incident and transmitted illumination
S-20-L	Binocular stereomicroscope, tungsten incident illumination
S-20-2L	Binocular stereomicroscope, tungsten incident and transmitted illumination
ST-30B-2L	Binocular stereomicroscope, tungsten incident and transmitted illumination
ST-30-2LR	Binocular stereomicroscope, tungsten incident and transmitted illumination
ST-30-2LF	Binocular stereomicroscope, tungsten incident and transmitted illumination
ST-30-2Led	Binocular stereomicroscope, LED incident and transmitted illumination, rechargeable battery
ST-30-2LedR	Binocular stereomicroscope, LED incident and transmitted illumination, rechargeable battery
ST-40B-2L	Binocular stereomicroscope, tungsten incident and transmitted illumination
ST-40-2L	Binocular stereomicroscope, tungsten incident and transmitted illumination
ST-45-2L	Binocular stereomicroscope, halogen incident and transmitted illumination
ST-50	Binocular stereomicroscope, tungsten incident illumination
ST-50Led	Binocular stereomicroscope, LED incident illumination, flexible arm

ST-30-2LF

STEREO Series

Versatility

The range includes a model, the ST-30-2Led, which allows to work without worrying about the electrical power supply, thanks to its rechargable longlife battery. "Cold" light allows an excellent vision of the samples.

Heads

Binocular heads (except for MS-2 model). ST-40B-2L, ST-40-2L and ST-35-2L models have 360° rotating heads. All remaining models have fixed heads. STX, S-10-P, S-10-L and S-10-2L models have vertical heads.

Specimen stage

All models have specimen stage fitted with a black/white disc and specimen clips. Models with transmitted light have also a frosted disc.

Interpupillary distance

Binocular heads have an interpupillary distance adjustable between 51 and 75mm. Dioptric compensation adjustable on eyepiece tubes, except for MS-2 model.

Optical system

WF10x/20mm eyepieces. Supplied objective changes according to the model: 2x fixed objective or double selectable objective (2x-4x or 1x-3x). Using additional eyepieces and objectives, it's possible to obtain up to 80 magnifications.
The ST-50 and ST-50Led models have a long working distance 2x objective (119 mm).

Illumination

The models with incident and/or transmitted light have 12V/10W tungsten bulbs. The ST-45-2L model is the only one supplied with halogen bulbs and brightness control. ST-30-2Led, ST-30-2LedR and ST-50Led have LED illumination.

Focusing

Every model is equipped with focus adjustment knobs located on each side of the stand.

STEREO Series - Models

MS-2

S-10-L

S-20-L

S-10-P

S-10-2L

S-20-2L

STEREO Series - Models

ST-30-2LF

ST-40-2L

ST-30-2LR

ST-30-2Led

ST-45-2L

ST-50

STX

STEREO Series

LONG WORKING DISTANCE

STEREO Series - Technical specifications

Model	Head	Eyepiece(s)	Objectives	Stand	Illumination
MS-2	360° rotating - 45° inclined	WF10x/20mm	Fixed 2x	Pillar	Without illumination
STX	Fixed - vertical	WF10x/20mm	Fixed 2x	Pillar, with fixed holder	LED incident light with slot for 2 AA batteries (batteries not included)
S-10-P	Fixed - vertical	WF10x/20mm	Fixed 2x	Pillar	Without illumination
S-10-L	Fixed - vertical	WF10x/20mm	Fixed 2x	Pillar	Incident light - tungsten bulb
S-10-2L	Fixed - vertical	WF10x/20mm	Fixed 2x	Pillar	Incident and transmitted light - tungsten bulbs
S-20-L	Fixed - 45° inclined, backwards	WF10x/20mm	Fixed 2x	Pillar	Incident light - tungsten bulb
S-20-2L	Fixed - 45° inclined, backwards	WF10x/20mm	Fixed 2x	Pillar	Incident and transmitted light - tungsten bulbs
ST-30B-2L	Fixed - 45° inclined, backwards	WF10x/20mm	Selectable 1x-3x	Pillar	Incident and transmitted light - tungsten bulbs
ST-30-2LR	Fixed - 45° inclined, backwards	WF10x/20mm	Selectable 2x-4x	Pillar	Incident and transmitted light - tungsten bulbs
ST-30-2LF	Fixed - 45° inclined, forwards	WF10x/20mm	Selectable 2x-4x	Pillar	Incident and transmitted light - tungsten bulbs
ST-30-2Led	Fixed - 45° inclined, forwards	WF10x/20mm	Selectable 2x-4x	Pillar	LED Incident and transmitted light - rechargeable battery
ST-30-2LedR	Fixed - 45° inclined, backwards	WF10x/20mm	Selectable 2x-4x	Pillar	LED Incident and transmitted light - rechargeable battery
ST-40B-2L	360° rotating - 45° inclined	WF10x/20mm	Selectable 1x-3x	Pillar	Incident and transmitted light - tungsten bulbs
ST-40-2L	360° rotating - 45° inclined	WF10x/20mm	Selectable 2x-4x	Pillar	Incident and transmitted light - tungsten bulbs
ST-45-2L	360° rotating - 45° inclined	WF10x/20mm	Selectable 2x-4x	Pillar with fixed holder	Incident and transmitted halogen lights with intensity adjustment
ST-50	Fixed - 45° inclined, forwards	WF10x/20mm	Fixed 2x	Overhanging	Incident light - tungsten bulb
ST-50Led	Fixed - 45° inclined, forwards	WF10x/20mm	Fixed 2x	Overhanging	LED incident light on flexible Arm

STEREO Series

BATTERY FOR FIELD USE

ST-30-Led with rechargeable batteries
Battery box: 3 x AA, 1.2V NiMh – replaceable by the user
Battery pack: 3 x AA, 1800 mAh
Time required for a full recharge: 10 hours
Battery runtime with LED incident light at maximum power: 12 hours
Battery runtime with LED transmitted light at maximum power: 14 hours
Battery charging enabled while using the microscope.
Performances estimated with batteries at their maximum efficiency

STEREO Series - Accessories

ST-001	Eyepieces (pair) WF5x/22mm
ST-002	Eyepieces (pair) WF10x/20mm
ST-003	Eyepieces (pair) WF15x/15mm
ST-004	Eyepieces (pair) WF20x/13mm
ST-005	Eyepiece micrometer WF10x
ST-020	Objective 1x for S-10-P , S-10-L, S-10-2L, S-20-L, and S-20-2L
ST-021	Objective 3x for S-10-P , S-10-L, S-10-2L, S-20-L, and S-20-2L
ST-022	Objective 4x for S-10-P , S-10-L, S-10-2L, S-20-L, and S-20-2L
ST-025	Objective 1x for ST-50 and ST-50Led
ST-026	Objective 3,5x for ST-50 and ST-50Led
ST-040	Darkfield condenser
ST-041	Sample clip
ST-032	Eye cups (pair) type 1
ST-011	White/black object-plate, type 1 dia. 60 mm
ST-012	White/black object-plate, type 2 dia. 95 mm
ST-015	Frosted object-plate, type 1, dia. 60 mm
ST-014	Frosted object-plate, type 2, dia. 95 mm
ST-006	Tungsten bulb, 12V/10W
ST-008	Tungsten bulb, 12V/10W (for ST-50 only)
ST-028	Halogen bulb 12V/10W
ST-009	Dust cover, type 10
ST-010	Dust cover, type 11, ST-50 and ST-50Led

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LAB Series

Stereomicroscopes for teachers

LAB

LAB Series

The LAB series can be considered as the entry-level of the OPTIKA professional stereomicroscopes range.
The two models have been designed for end users who need professional quality at low cost.

LAB-10	Binocular, selectable magnification
LAB-20	Binocular, zoom magnification

LAB-20

LAB-10

LAB Series

Heads
Binocular heads, 360° rotating and 45° inclined.

Interpupillary distance
Adjustable between 51 and 75 mm.

Eyepieces
WF10x/20 mm. Dioptric compensation adjustable on both eyepiece tubes.

Specimen stage
Fitted with a semi-transparent disc for transmitted light with specimen clips.

Objectives
LAB 10: with double magnification (2x-4x) that can be selected by rotating the lens unit. Working distance 80mm.

LAB 20: continuous zoom 0,7x ...4,5x. (6,43:1 zoom factor).
Working distance: 85 mm.

Stand
Fixed arm type with focusing mechanism.

Focusing
Rack and pinion controlled by a pair of knobs placed on both sides of the stand.

Illumination
Double adjustable illuminator for incident and transmitted light fitted with two high-efficiency LED light sources. The angle of the incident illuminator is adjustable. Voltage: 110/240V ac.

LAB Series - Technical specifications

Model	Head	Eyepieces	Objectives	Working Distance	Stand	Illumination
LAB-10	Binocular	WF 10x/20mm	2x - 4x selectable by rotating	80 mm	Pillar stand with fixed holder	Double incident and transmitted light. High-efficiency LED light sources with separate brightness controls
LAB-20	Binocular	WF 10x/20mm	0,7x....4,5x zoom	85 mm	Pillar stand with fixed holder	Double incident and transmitted light. High-efficiency LED light sources with separate brightness controls

LAB Series - Accessories

ST-001	Eyepieces (pair) WF5x/22mm
ST-401	Eyepieces (pair) WF10x/20mm
ST-402	Eyepieces (pair) WF15x/15mm
ST-403	Eyepieces (pair) WF20x/10mm
ST-405	Eyepiece micrometric WF10x/20mm
ST-410	Additional lens 0,5x for LAB 20 (w.d. 170 mm)
ST-411	Additional lens 1,5x for LAB 20 (w.d. 42 mm)
ST-415	Eye cups (pair) type 1
ST-029	Dust cover type 12

LAB-10

LAB-20

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SZM Series

Advanced stereomicroscopes for teachers

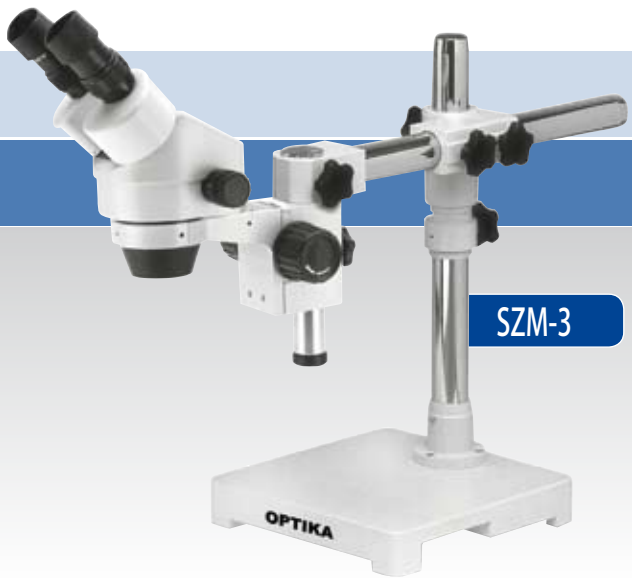
SZM

SZM Series

The stereomicroscopes of the SZM series are instruments designed for laboratory and industry applications.

Their optical and mechanical qualities place them at the top of their category and the price/quality ratio is excellent. The stereomicroscopes share the same optical system consisting of binocular and trinocular heads with zoom objectives.
The four models of the SZM series find their proper application wherever professional instruments are required. Several accessories provide an ample choice of configurations and applications.

SZM-1	Binocular with pillar stand, halogen lamp
SZM-1Led	Binocular with pillar stand, LED
SZM-2	Trinocular with pillar stand, halogen lamp
SZM-2Led	Trinocular with pillar stand, LED
SZM-3	Binocular with overhanging stand
SZM-4	Trinocular with overhanging stand



SZM Series

Heads
Binocular and trinocular, 360° rotating and 45° inclined.

Interpupillary distance
Adjustable between 51 and 75 mm.

Dioptric compensation
On both eyepiece tubes.

Eyepieces
EWF10x/20 mm

Objectives
Parfocal achromatic zoom 0,7x...4,5x (6,428:1 zoom factor).

Specimen stage:
Models with illumination are fitted with a black/white disc, specimen clips and a frosted disc for transmitted light.

Focusing
Rack and pinion mechanism controlled by a pair of knobs placed on both sides of the stand.

Stand
Pillar stand: 30 mm and 25 cm high. Base: 26x20x6h cm. Overhanging stand: 42 cm high, 23x23 cm base and 45 cm horizontal arm lenght.

Illumination
Double, adjustable incident and transmitted light, fitted with two 12V/15W halogen bulbs. The angle of the incident illumination is adjustable. The two models SZM-1/2Led are equipped with a double high-power LED.

SZM Series - Technical specifications

Model	Head	Eyepieces	Objectives	Working Distance	Stand	Illumination
SZM-1	Binocular	EWF 10x/20mm	0,7 .... 4,5x Zoom	100 mm	Pillar stand	Incident and transmitted 12V/15W halogen
SZM-1Led	Binocular	EWF 10x/20mm	0,7 .... 4,5x Zoom	100 mm	Pillar stand	**Incident: high power single LED Transmitted: LED diffusing disc**
SZM-2	Trinocular	EWF 10x/20mm	0,7 .... 4,5x Zoom	100 mm	Pillar stand	Incident and transmitted 12V/15W halogen
SZM-2Led	Trinocular	EWF 10x/20mm	0,7 .... 4,5x Zoom	100 mm	Pillar stand	**Incident: high power single LED Transmitted: LED diffusing disc**
SZM-3	Binocular	EWF 10x/20mm	0,7 .... 4,5x Zoom	100 mm	Overhanging stand	---
SZM-4	Trinocular	EWF 10x/20mm	0,7 .... 4,5x Zoom	100 mm	Overhanging stand	---

SZM Series - Accessories

ST-081	Eyepieces (pair) WF10x/20 mm
ST-082	Eyepieces (pair) WF15x/15 mm
ST-083	Eyepieces (pair) WF20x/10 mm
ST-084	Eyepiece micrometric WF10x/20 mm
ST-085	Additional lens 0,5x (w.d. 165 mm)
ST-091	Additional lens 0,75x (w.d. 117 mm)
ST-086	Additional lens 1,5x (w.d. 47 mm)
ST-087	Additional lens 2x (w.d. 26 mm)
ST-088	Polarising set (filters and rotating stage)
ST-040	Darkfield condenser
ST-041	Sample clip
ST-100	Moving stage
ST-089	Reflex camera adapter for full frame sensor
ST-090	CCD camera adapter (for 1/3" sensors)
ST-090.1	CCD camera adapter (for 1/2" sensors)
ST-036	Eye cups (pair) type 2
ST-012	White/black object-plate, type 2 dia. 95 mm
ST-014	Glass stage, type 2, dia. 95 mm
ST-038	Halogen bulb, 12V/15W
ST-037	Halogen bulb, 12V/15W, with dichroic mirror
ST-033	Dust cover type 13
ST-666	Heating stage, with digital temperature controller
ST-173	APS-C Reflex camera adapter

CAMERA ADAPTER CHART FOR TRINOCULAR MODELS

VC CAMERAS / OPTIKAM CAMERAS

C-MOUNT

1/2 — ST-090.1

1/3 — ST-090

WITH LENS

Not necessary

DIGI

Not necessary

REFLEX APS-C

T/2*

M-173

REFLEX Full frame 35mm

T/2*

ST-089

SZM
Trinocular versions

*T/2 is not supplied by OPTIKA

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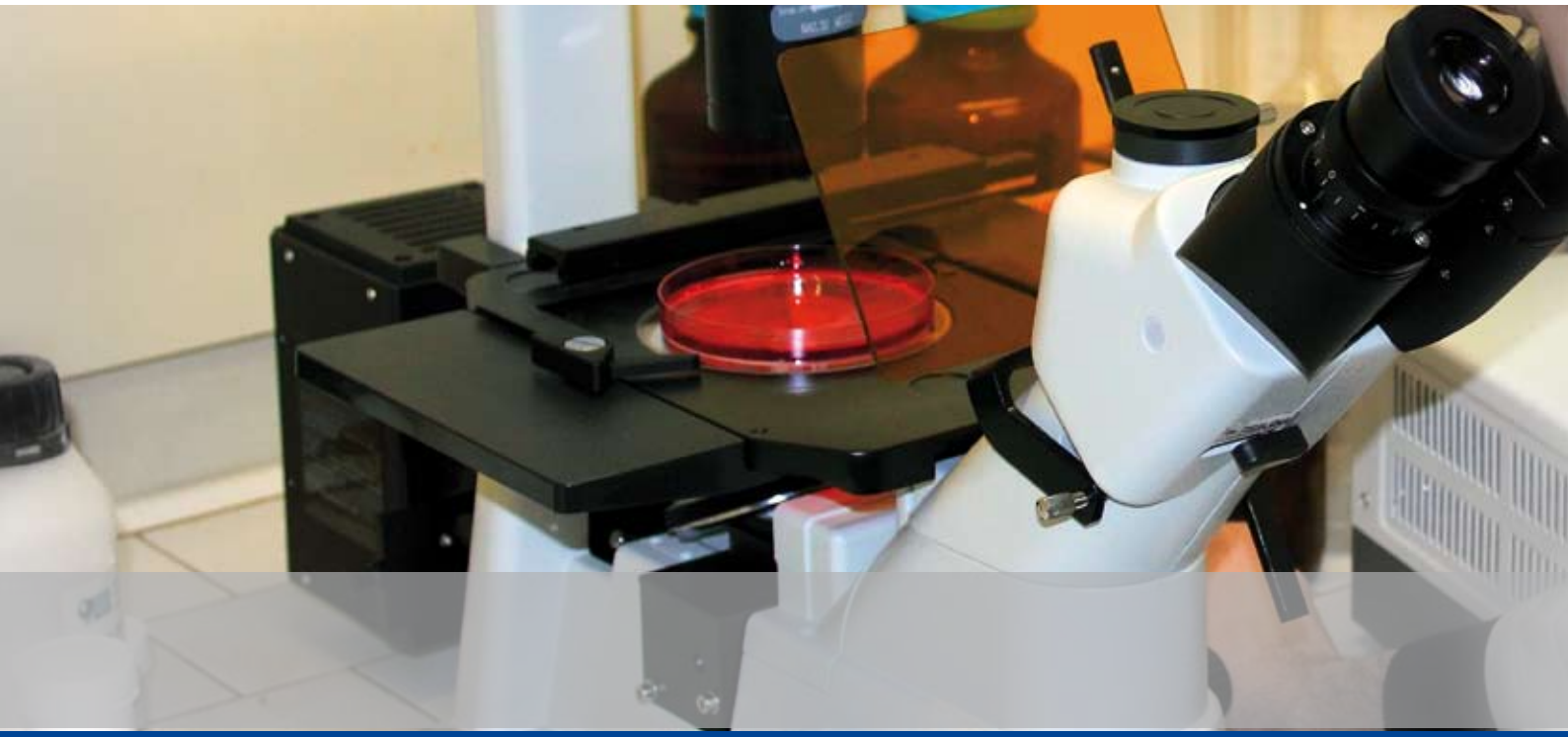
LABORATORY MICROSCOPES



LABORATORY MICROSCOPES

B-350 SERIES - Entry-level upright laboratory microscopes page 57

B-500 SERIES - High quality upright laboratory microscopes page 65

B-600 SERIES- High-end upright laboratory microscopes page 73

POL SERIES - Laboratory polarizing microscopes page 81

FLUO SERIES - Epi-fluorescence microscopes page 85

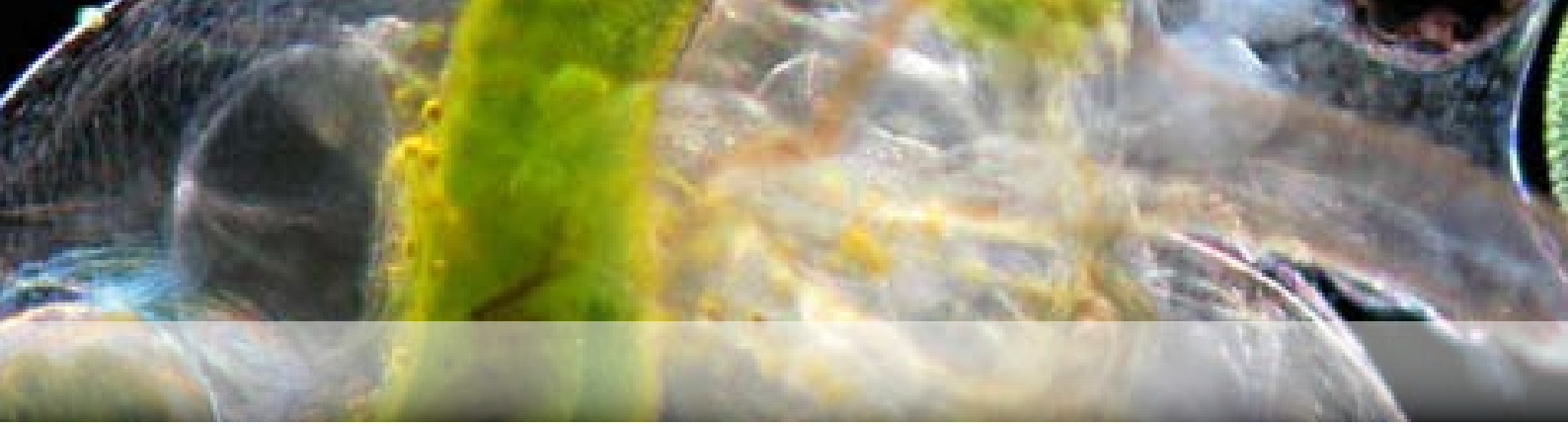
XDS SERIES - Inverted biological microscopes page 97

B-350 Series

Entry-level upright laboratory microscopes

X-LED™

B-350



B-350 Series

The B-350 series represents the right balance between price and quality.
Thanks to its wide range of models, it can be successfully used both in advanced teaching situations and in laboratories.
Professional users will certainly value the technical features of the B-350 series that make its high quality microscopes resistant and reliable. The B-350 series includes 11 models featuring achromatic, planachromatic and infinity corrected plan objectives.
Let's take a closer look to each model:

B-352A	Binocular microscope, achromatic objectives.
B-353A	Trinocular microscope, achromatic objectives.
B-352PL	Binocular microscope, planachromatic objectives.
B-353PL	Trinocular microscope, planachromatic objectives.
B-352PLi	Binocular microscope, infinity-corrected E-planachromatic objectives.
B-353PLi	Trinocular microscope, infinity-corrected E-planachromatic objectives.
B-352Ph	Binocular microscope, Ph planachromatic objectives.
B-353Ph	Trinocular microscope, Ph planachromatic objectives.
B-352Phi	Binocular microscope, Ph infinity-corrected E-planachromatic objectives.
B-353Phi	Trinocular microscope, Ph infinity-corrected E-planachromatic objectives.
B-353DK	Trinocular microscope for immersion darkfield technique, with planachromatic iris 100x objective.

Standard LED

X-LED™

X-LED™ - The future of illumination

OPTIKA is proud to introduce its own revolutionary LED powered illumination system. Developed by our R&D dept., it consists of a new combination of LED and optical technology. A new high-efficiency single chip LED works in combination with a special optical lens, which allows to double the intensity of the light generated by the LED itself. The result is a quantity of light equivalent to the light generated by a standard 30-35W halogen bulb, but with a colour temperature of 6300K. It means white light instead of the yellow one produced by halogen bulbs.
The electrical consumption (3.6W only) shows the high efficiency of the system: same light intensity with less than 10% of the consumption of a standard halogen bulb. Last but not least, the lifetime of our LED is 50.000 hours, instead of 1.500 hours ...!

B-350 Series

Optical system & objectives

The models of the B-350 series are equipped with two different types of optical system: the standard 160mm one and the infinity corrected system (IOS). In both cases the field diameter of the eyepieces is 20 mm.

Microscope stand

Modern and ergonomic, this stand is made of die-cast aluminium. Coarse and fine focusing (graduation: 0.002mm) with coaxial control knobs. Adjustable focusing tension and limit stop.

Head

Available in binocular or trinocular version.
The heads are equipped with interpupillary distance control (55-75 mm) as well as with dioptric compensation.
All heads are 360° rotatable and 30° inclined.

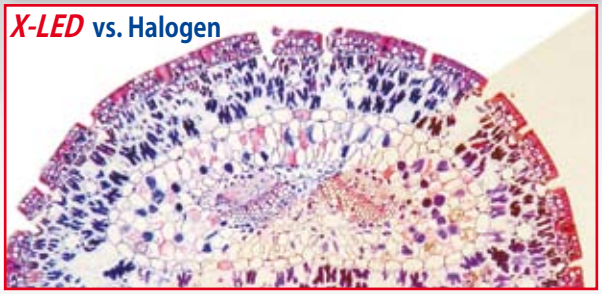
Illumination

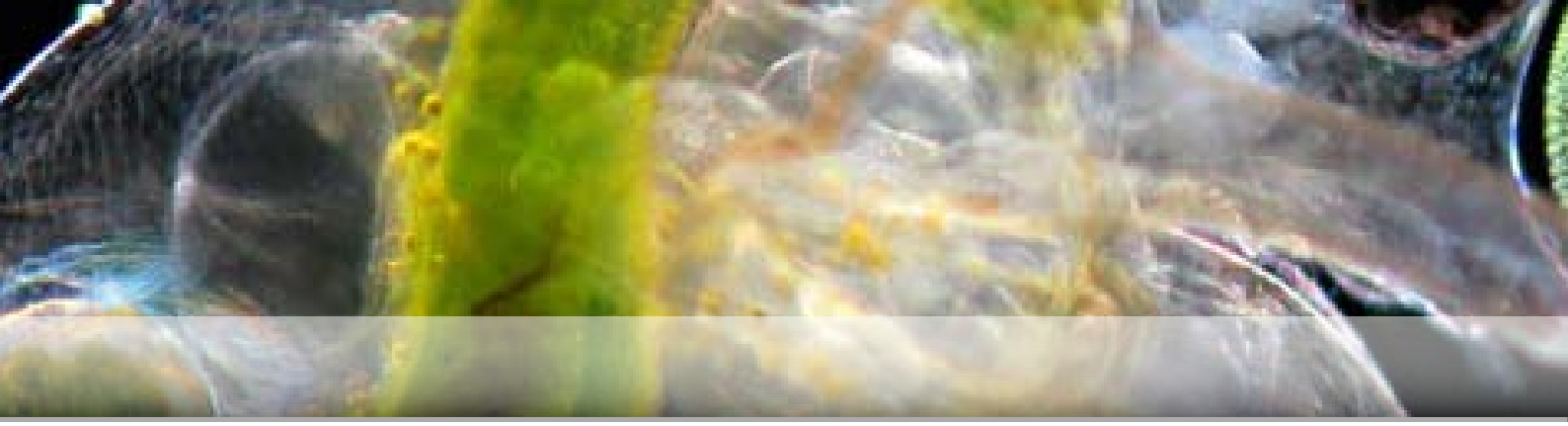
The illuminating system consists of X-LED source. The brightness can be adjusted by a rheostat located on the right side of the microscope.

Condenser

An Abbe type condenser is included in the package. It can be centred through a double-control system and adjusted in height through a rack-and-pinion mechanism (control knobs located on both sides of the microscope stand). The condenser is also fitted with an iris diaphragm whose aperture can be adjusted by a graduated reference scale.

Frog, blood smear. Real picture taken from B-353PLi with 100x objective without immersion oil





B-350 Series - Models

B-353PLi

Quintuple nosepiece
4x 10x 40x 100x
Planachromatic IOS objectives

B-353PL

Quintuple nosepiece
4x 10x 40x 100x
Planachromatic objectives

B-350 Series - Models

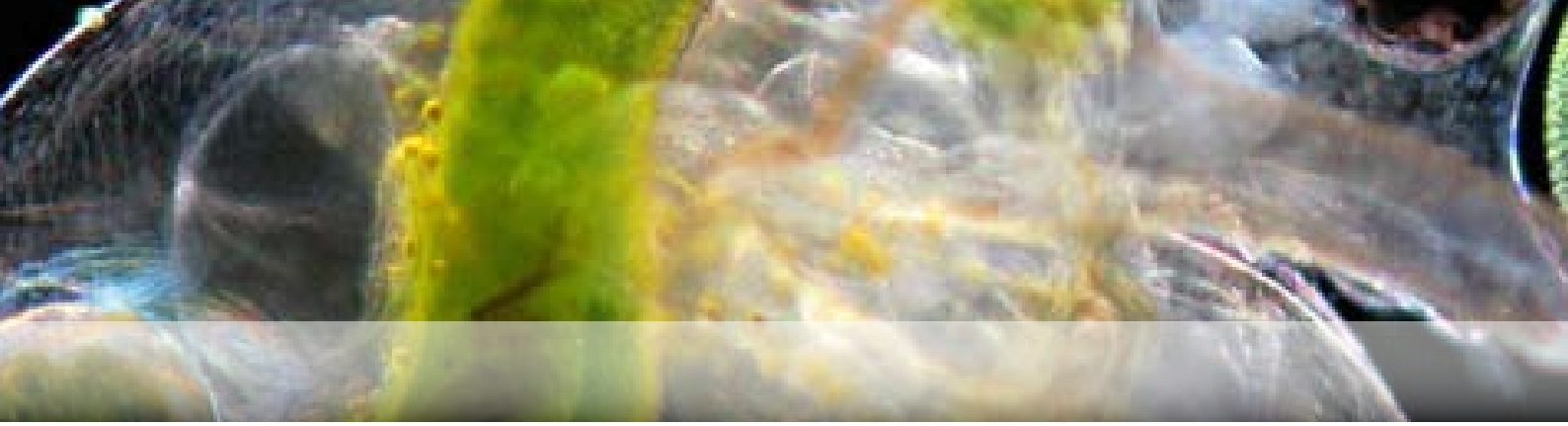
B-353DK

Achromatic 4x, 10x, 40x,
Planachromatic
100x (oil, with iris diaphragm)

B-353Ph

Quintuple nosepiece
4x 10xPh 40xPh 100xPh
Planachromatic objectives

X-LED™



B-350 Series - Additional models

B-353LD2

LED Epi-Fluorescence
trinocular microscope

B-353FL

HBO Epi-Fluorescence
trinocular microscope

B-353MET

Upright trinocular metallurgical
microscope

B-353POL

Upright trinocular
polarizing microscope

B-350 Series - Technical specifications

Model	Head	Eyepieces	Objectives	Nosepiece	Stage	Focusing	Condenser	Illuminator
B-352A	Binocular 360°rotating 30° inclined	Wide Field 10X / 20 mm	Achromatic 4x, 10x, 40x, 100x (oil)	Quadruple	Double layer mechanical sliding stage, 160x142 mm, moving range 76x52 mm	Coaxial coarse and fine system, with limit stop	1.25 N.A. Abbe type, with centring system	*X-LED™*, with brightness control
B-353A	Trinocular 360°rotating 30° inclined	Wide Field 10X / 20 mm	Achromatic 4x, 10x, 40x, 100x (oil)	Quadruple	Double layer mechanical sliding stage, 160x142 mm, moving range 76x52 mm	Coaxial coarse and fine system, with limit stop	1.25 N.A. Abbe type, with centring system	*X-LED™*, with brightness control
B-352PL	Binocular 360°rotating 30° inclined	Wide Field 10X / 20 mm	Planachromatic 4x, 10x, 40x, 100x (oil)	Quintuple	Double layer mechanical sliding stage, 160x142 mm, moving range 76x52 mm	Coaxial coarse and fine system, with limit stop	1.25 N.A. Abbe type, with centring system	*X-LED™*, with brightness control
B-353PL	Trinocular 360°rotating 30° inclined	Wide Field 10X / 20 mm	Planachromatic 4x, 10x, 40x, 100x (oil)	Quintuple	Double layer mechanical sliding stage, 160x142 mm, moving range 76x52 mm	Coaxial coarse and fine system, with limit stop	1.25 N.A. Abbe type, with centring system	*X-LED™*, with brightness control
B-352PLi	Binocular 360°rotating 30° inclined	Wide Field 10X / 20 mm	Planachromatic IOS 4x, 10x, 40x, 100x (oil)	Quintuple	Double layer mechanical sliding stage, 160x142 mm, moving range 76x52 mm	Coaxial coarse and fine system, with limit stop	1.25 N.A. Abbe type, with centring system	*X-LED™*, with brightness control
B-353PLi	Trinocular 360°rotating 30° inclined	Wide Field 10X / 20 mm	Planachromatic IOS 4x, 10x, 40x, 100x (oil)	Quintuple	Double layer mechanical sliding stage, 160x142 mm, moving range 76x52 mm	Coaxial coarse and fine system, with limit stop	1.25 N.A. Abbe type, with centring system	*X-LED™*, with brightness control
B-352Ph	Binocular 360°rotating 30° inclined	Wide Field 10X / 20 mm	Planachromatic 4x, 10xPh, 40xPh, 100xPh (oil)	Quintuple	Double layer mechanical sliding stage, 160x142 mm, moving range 76x52 mm	Coaxial coarse and fine system, with limit stop	Phase condenser (10x, 40x, 100x) with darkfield (dry) and brightfield	*X-LED™*, with brightness control
B-353Ph	Trinocular 360°rotating 30° inclined	Wide Field 10X / 20 mm	Planachromatic 4x, 10xPh, 40xPh, 100xPh (oil)	Quintuple	Double layer mechanical sliding stage, 160x142 mm, moving range 76x52 mm	Coaxial coarse and fine system, with limit stop	Phase condenser (10x, 40x, 100x) with darkfield (dry) and brightfield	*X-LED™*, with brightness control
B-352Phi	Binocular 360°rotating 30° inclined	Wide Field 10X / 20 mm	E-Plan IOS 10xPh, 20xPh, 40xPh, 100xPh (oil)	Quintuple	Double layer mechanical sliding stage, 160x142 mm, moving range 76x52 mm	Coaxial coarse and fine system, with limit stop	Phase condenser (10x, 20x, 40x, 100x) and brightfield	*X-LED™*, with brightness control
B-353Phi	Trinocular 360°rotating 30° inclined	Wide Field 10X / 20 mm	E-Plan IOS 10xPh, 20xPh, 40xPh, 100xPh (oil)	Quintuple	Double layer mechanical sliding stage, 160x142 mm, moving range 76x52 mm	Coaxial coarse and fine system, with limit stop	Phase condenser (10x, 20x, 40x, 100x) and brightfield	*X-LED™*, with brightness control
B-353DK	Trinocular 360°rotating 30° inclined	Wide Field 10X / 20 mm	Achromatic 4x, 10x, 40x, Planachromatic 100x (oil, with iris diaphragm)	Quadruple	Double layer mechanical sliding stage, 160x142 mm, moving range 76x52 mm	Coaxial coarse and fine system, with limit stop	1.25 N.A. Abbe and extra N.A. 1.36 darkfield type with built-in X-LED	*X-LED™*, with brightness control

B-350 Series - Accessories

M-301	Eyepiece high-point WF10x/20mm
M-302	Eyepiece high-point WF16x/12mm
M-303	Eyepiece micrometer high-point WF10x/20mm
M-005	Micrometric slide 26x76 mm, range 1 mm, div. 0,01 mm
M-310	Objective achromatic 4x/0.10
M-311	Objective achromatic 10x/0.25
M-312	Objective achromatic 20x/0.40
M-313	Objective achromatic 40x/0.65
M-314	Objective achromatic 60x/0.80
M-315	Objective achromatic 100x/1.25 (oil)
M-320	Objective planachromatic 4x/0.10
M-321	Objective planachromatic 10x/0.25
M-322	Objective planachromatic 20x/0.40
M-323	Objective planachromatic 40x/0.65
M-324	Objective planachromatic 60x/0.80
M-325	Objective planachromatic 100x/1.25
M-330	Objective IOS planachromatic 4x/0.10
M-331	Objective IOS planachromatic 10x/0.25
M-332	Objective IOS planachromatic 20x/0.40
M-333	Objective IOS planachromatic 40x/0.65
M-334	Objective IOS planachromatic 100x/1.25
M-059	Objective with iris diaphragm for darkfield PL100x (oil)
M-340	Objective planachromatic for phase contrast 10x/0.25
M-341	Objective planachromatic for phase contrast 40x/0.65
M-342	Objective planachromatic for phase contrast 100x/1.25 (oil)
M-350	Objective IOS planachromatic for phase contrast 10x/0.25
M-351	Objective IOS planachromatic for phase contrast 20x/0.40
M-352	Objective IOS planachromatic for phase contrast 40x/0.65
M-353	Objective IOS planachromatic for phase contrast 100x/1.25 (oil)
M-360	Complete phase contrast set with PLAN obj. 10x, 40x, 100x, with darkfield condenser for dry objectives
M-361	Complete phase contrast set with IOS E-PLAN obj. 10x, 20x, 40x, 100x
M-362	Polarizing set (filters only)
M-363	Rotating table for polarizing set
M-364	Darkfield condenser for dry objectives
M-173	Photo tube adapter for APS-C sensor
M-365	Photo tube adapter for full frame sensor
M-366	CCD camera adapter
M-031	Dust cover type 3
M-974	Blue filter, 32mm diameter
M-976	Green filter, 32mm diameter
M-978	Yellow filter, 32mm diameter
M-988	Frosted glass filter, 32mm diameter
M-069	Solar battery pack
M-666	Heating stage, with digital temperature controller

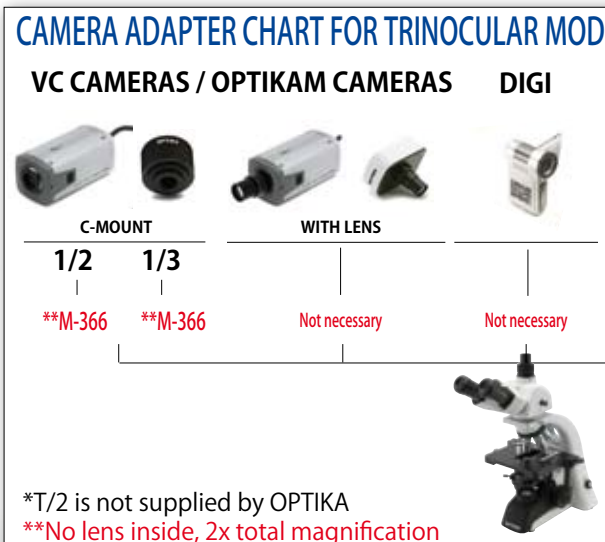
Solar battery pack

Included battery: rechargeable – Lithium-Poly.
Capacity: 2000 mAh.
Output voltage: 5,5Vdc. Dimensions: 110x60x15 mm.
Autonomy: 2,5h at max intensity.
Charging modes: with solar panel (12h) - with included power supply (6h).

B-350 Series - Photo-video applications

The B-350 series is compatible with our Optikam and DIGI cameras.
For T-mount (reflex) and C-mount cameras, specific adapters are available (according to the adapter chart).

CAMERA ADAPTER CHART FOR TRINOCULAR MODELS



*T/2 is not supplied by OPTIKA
**No lens inside, 2x total magnification

B-350
Trinocular versions

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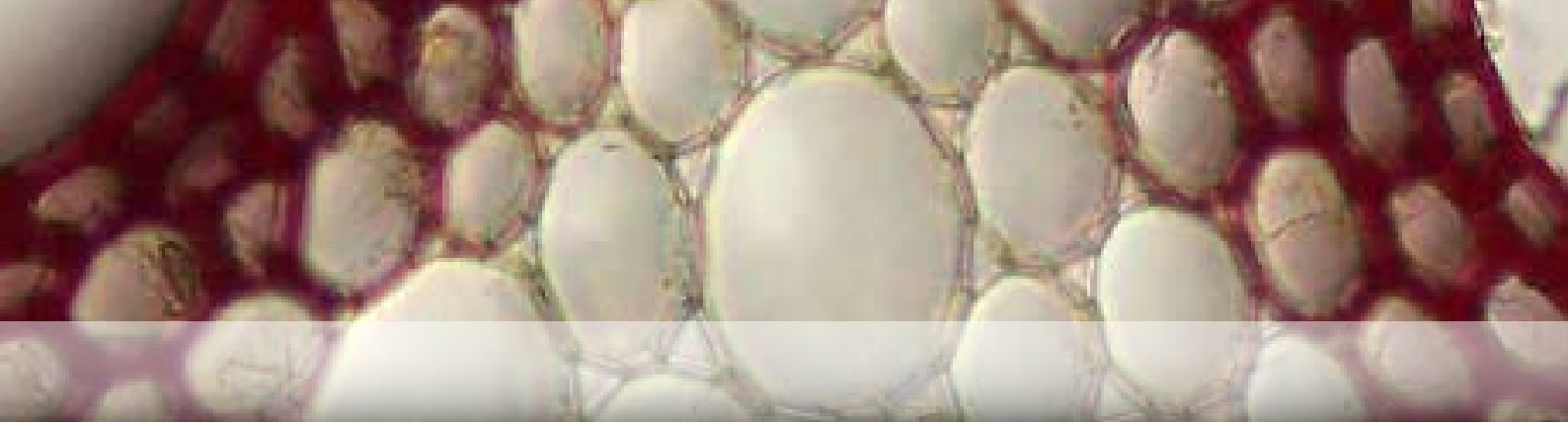
B-500 Series

High quality upright laboratory microscopes

infinifix™ optical system

IOS™ objectives

B-500



B-500 Series

The B-500 microscopes have been designed for the best performance in routine laboratory use. According to the models, two different optical systems are available (InfiniFix and IOS).

infinifix™ optical system

With InfiniFix optical system, the two worlds of infinity-corrected and 160 mm optical system find the way to meet each other. With this exclusive optical system all InfiniFix models use a true infinity-corrected optical path, implemented with standard 160 mm objectives.

IOS™ objectives

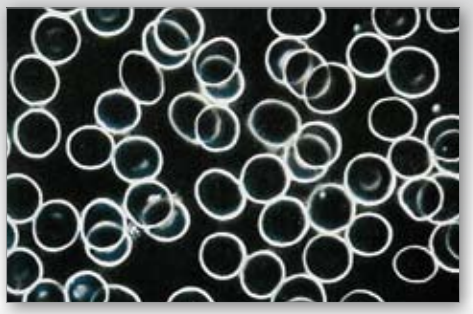
IOS simply means "Infinity Optical System". All IOS models of B-500 series are equipped with true Infinity Corrected Objectives.

B-500Bsp	Binocular microscope, semi-planachromatic objectives
B-500Tsp	Trinocular microscope, semi-planachromatic objectives
B-500Bpl	Binocular microscope, planachromatic objectives
B-500Tpl	Trinocular microscope, planachromatic objectives
B-500Bi	Binocular microscope, IOS planachromatic objectives
B-500Ti	Trinocular microscope, IOS planachromatic objectives
B-500ERGO	Binocular microscope, planachromatic objectives. With ergonomic head
B-500iERGO	Binocular microscope, IOS planachromatic objectives. With ergonomic head
B-500Bph	Binocular microscope, planachromatic objectives for phase contrast
B-500Tph	Trinocular microscope, planachromatic objectives for phase contrast
B-500BiPh	Binocular microscope, IOS planachromatic objectives for phase contrast
B-500TiPh	Trinocular microscope, IOS planachromatic objectives for phase contrast
B-500Ti-2	Multi head microscope (2 heads), IOS planachromatic objectives
B-500Ti-3	Multi head microscope (3 heads), IOS planachromatic objectives
B-500Ti-5	Multi head microscope (5 heads), IOS planachromatic objectives
B-500TDK	Trinocular microscope for immersion darkfield technique, with planachromatic iris 100x objective

B-500TDK: Brief introduction to our darkfield system for blood analysis

Two great solutions together:
- our 1.36 - 1.25 N.A. special extra efficient dark-field condenser
- OPTIKA X-LEDTM illuminator (integrated into the condenser)

RESULTS: our immersion darkfield system provides the same result achieved by 150W external illuminators in combination with traditional cardioid darkfield condenser.

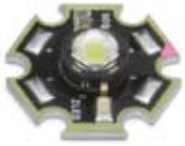


X-LED™ The future of illumination

B-500 Series - Specifications

OPTIKA is proud to introduce its own revolutionary LED powered illumination system. Developed by our R&D dept., it consists of a new combination of LED and optical technology.
A new high-efficiency single chip LED works in combination with a special optical lens, which allows to double the intensity of the light generated by the LED itself.
The result is a quantity of light equivalent to the light generated by a normal 30-35W halogen bulb, but with a colour temperature of 6300K. It means white light instead of the yellow one produced by halogen bulbs.
The electrical consumption (3.6W only) shows the high efficiency of the system: same light intensity with less than 10% of the consumption of a normal halogen bulb.
Last but not least, the lifetime of our LED: 50.000 hours, instead of 1.500 hours.

Standard LED



X-LED™ illumination system

Optical system & objectives

S-Plan and Plan 160mm Finity Corrected Objectives on InfiniFix models.
Plan Infinity corrected objectives on all IOS models.

Microscope stand

The modern stand design, with accessible and ergonomic controls, complements and enhances the instrument's usability.

Head

The wide 22 mm field of view and the high-point eyepieces allow for hours of use without eye fatigue.

Illuminators

The B-500 microscopes are equipped with two kinds of illuminators (both with field diaphragm): high-efficiency dichroic 20W halogen illuminator (models with SEMI-PLAN objectives), or our special X-LED illuminator (models with PLAN objectives). Both systems permit light-intensive applications, such as phase contrast or darkfield, without the need of complex active cooling and keeping the electrical consumption at lowest levels.

Condenser

Two kinds of swing-out condensers are available (depending on the models):
- 0.10/1.20 N.A. for better performances with high magnifications;
- 0.22/0.90 N.A. for better performances with low magnifications (pathology)

Specimen stage

A generously sized double layer stage, suitable for two specimen slides, optimally completes the instrument.
175x145mm, X-Y range: 76x51mm.

A perfect mix of performance and ease of use

B-500 Series - Models

B-500Ti

Quintuple reversed
Infinity Planachromatic
4x, 10x, 40x, 100x (oil)

A complete range of instruments

B-500 Series - Models

B-500Tpl

Quintuple reversed
Planachromatic
4x, 10x, 40x, 100x (oil)

infinifix™ optical system

X-LED™

B-500iERGO

Quintuple reversed
Infinity Planachromatic
4x, 10x, 40x, 100x (oil)

X-LED™

IOS™ objectives

CAMERA ADAPTER CHART FOR TRINOCULAR MODELS

VC CAMERAS / OPTIKAM CAMERAS

C-MOUNT

1/2 — M-620.1

1/3 — M-620

WITH LENS

M-699

DIGI

M-699

REFLEX APS-C

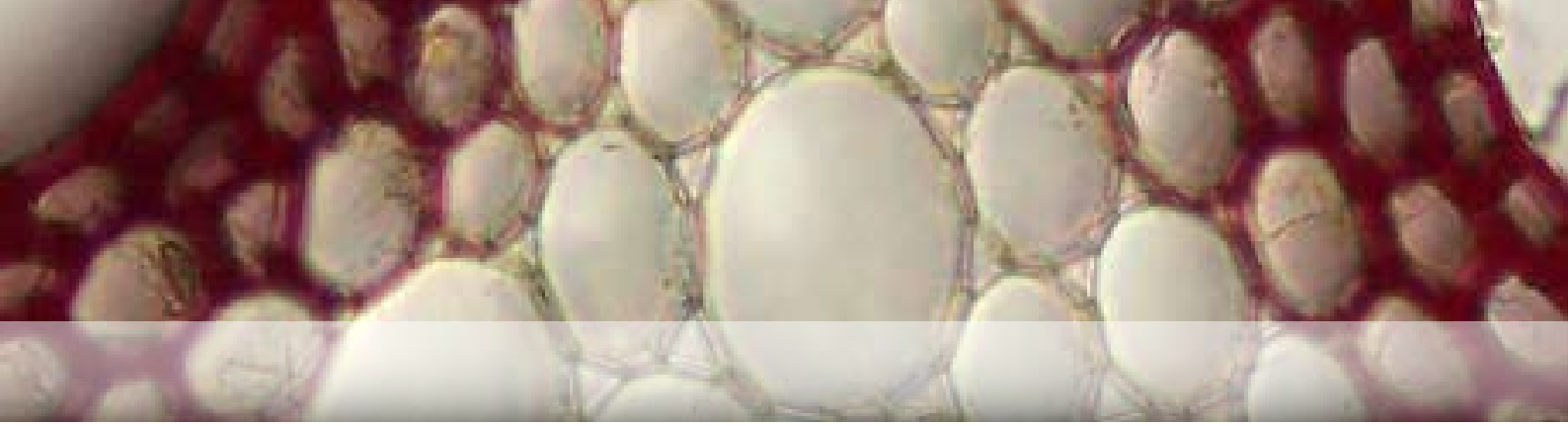
T/2* — M-173, M-699

REFLEX Full frame 35mm

T/2* — M-619

B-500
Trinocular versions

*T/2 is not supplied by OPTIKA



B-500 Series - Component scheme

Centering telescope for phase contrast

M-602

M-601

M-699 for eyepiece connection and DIGI

M-620 for C-MOUNT

M-619 for Reflex camera

Semiplan or plan achromatic objectives bright field or phase contrast

Binocular head

Trinocular head

M-513

M-616

M-618

M-513

B-500 Series - Technical specifications

Model	Optical System	Head	Eyepiece	Objectives	Nosepiece	Stage	Focusing	Condenser	Illuminator
B-500Bsp	InfiniFix	Binocular 360°rotating 30° inclined	Wide Field 10X / 22 mm	S-planachromatic 4x, 10x, 40x, 100x (oil)	Quintuple reversed	2-layer mechanical sliding stage, 175x145 mm	Coaxial coarse and fine control knobs	Swing-out 1.2 N.A., centrable	High efficiency Halogen 20W dichroic bulb
B-500Tsp	InfiniFix	Trinocular 360°rotating 30° inclined	Wide Field 10X / 22 mm	S-planachromatic 4x, 10x, 40x, 100x (oil)	Quintuple reversed	2-layer mechanical sliding stage, 175x145 mm	Coaxial coarse and fine control knobs	Swing-out 1.2 N.A., centrable	High efficiency Halogen 20W dichroic bulb
B-500Bpl	InfiniFix	Binocular 360°rotating 30° inclined	Wide Field 10X / 22 mm	Planachromatic 4x, 10x, 40x, 100x (oil)	Quintuple reversed	2-layer mechanical sliding stage, 175x145 mm	Coaxial coarse and fine control knobs	Swing-out 1.2 N.A., centrable	OPTIKA X-LED™ illuminator
B-500Tpl	InfiniFix	Trinocular 360°rotating 30° inclined	Wide Field 10X / 22 mm	Planachromatic 4x, 10x, 40x, 100x (oil)	Quintuple reversed	2-layer mechanical sliding stage, 175x145 mm	Coaxial coarse and fine control knobs	Swing-out 1.2 N.A., centrable	OPTIKA X-LED™ illuminator
B-500Bi	IOS	Binocular 360°rotating 30° inclined	Wide Field 10X / 22 mm	Infinity Planachro 4x, 10x, 40x, 100x (oil)	Quintuple reversed	2-layer mechanical sliding stage, 175x145 mm	Coaxial coarse and fine control knobs	Swing-out 0.90 N.A., centrable	OPTIKA X-LEDTM illuminator
B-500Ti	IOS	Trinocular 360°rotating 30° inclined	Wide Field 10X / 22 mm	Infinity Planachro 4x, 10x, 40x, 100x (oil)	Quintuple reversed	2-layer mechanical sliding stage, 175x145 mm	Coaxial coarse and fine control knobs	Swing-out 0.90 N.A., centrable	OPTIKA X-LED™ illuminator
B-500ERGO	InfiniFix	30°-60° ergo-nomical bino head 360°rotating	Wide Field 10X / 22 mm	Planachromatic 4x, 10x, 40x, 100x (oil)	Quintuple reversed	2-layer mechanical sliding stage, 175x145 mm	Coaxial coarse and fine control knobs	Swing-out 1.2 N.A., centrable	OPTIKA X-LED™ illuminator
B-500iERGO	IOS	30°-60° ergo-nomical bino head 360°rotating	Wide Field 10X / 22 mm	Infinity Planachro 4x, 10x, 40x, 100x (oil)	Quintuple reversed	2-layer mechanical sliding stage, 175x145 mm	Coaxial coarse and fine control knobs	Swing-out 0.90 N.A., centrable	OPTIKA X-LED™ illuminator
B-500BPh	InfiniFix	Binocular 360°rotating 30° inclined	Wide Field 10X / 22 mm	Planachromatic for phase contrast 10x, 20x, 40 , 100x (oil)	Quintuple reversed	2-layer mechanical sliding stage, 175x145 mm	Coaxial coarse and fine control knobs	1.25 N.A. Abbe type, with centring sy-stem, disc condenser for phase contrast	OPTIKA X-LED™ illuminator
B-500TPh	InfiniFix	Trinocular 360°rotating 30° inclined	Wide Field 10X / 22 mm	Planachromatic for phase contrast 10x, 20x, 40 , 100x (oil)	Quintuple reversed	2-layer mechanical sliding stage, 175x145 mm	Coaxial coarse and fine control knobs	1.25 N.A. Abbe type, with centring sy-stem, disc condenser for phase contrast	OPTIKA X-LED™ illuminator
B-500BiPh	IOS	Binocular 360°rotating 30° inclined	Wide Field 10X / 22 mm	Infinity Planachro for phase contrast 10x, 20x, 40 , 100x (oil)	Quintuple reversed	2-layer mechanical sliding stage, 175x145 mm	Coaxial coarse and fine control knobs	1.25 N.A. Abbe type, with centring sy-stem, disc condenser for phase contrast	OPTIKA X-LED™ illuminator
B-500TiPh	IOS	Trinocular 360°rotating 30° inclined	Wide Field 10X / 22 mm	Infinity Planachro for phase contrast 10x, 20x, 40 , 100x (oil)	Quintuple reversed	2-layer mechanical sliding stage, 175x145 mm	Coaxial coarse and fine control knobs	1.25 N.A. Abbe type, with centring sy-stem, disc condenser for phase contrast	OPTIKA X-LED™ illuminator
B-500TDK	InfiniFix	Trinocular 360°rotating 30° inclined	Wide Field 10X / 22 mm	Planachromatic 4x, 10x, 40x. Special PL100x (oil, with iris diaphragm)	Quintuple reversed	2-layer mechanical sliding stage, 175x145 mm	Coaxial coarse and fine control knobs	Swing-out 1.2 N.A. , centrable. Extra N.A. 1.36 darkfield type with built-in X-LED	OPTIKA X-LED™ illuminator
B-500Ti-2	IOS	Main Head: trino 360°/30°. 1 discussion heads: bino 360°/30°	Main head: WF10X/22mm Discussion heads: WF10x/20mm	Infinity Planachromatic 4x, 10x, 40x, 100x (oil)	Quintuple reversed	2-layer mechanical sliding stage, 175x145 mm	Coaxial coarse and fine control knobs	Swing-out 0.90 N.A., centrable	OPTIKA X-LED™ illuminator. Discussion laser pointer under the head
B-500Ti-3	IOS	Main Head: trino 360°/30° 2 discussion heads: bino 360°/30°	Main head: WF10X/22mm Discussion heads: WF10x/20mm	Infinity Planachromatic 4x, 10x, 40x, 100x (oil)	Quintuple reversed	2-layer mechanical sliding stage, 175x145 mm	Coaxial coarse and fine control knobs	Swing-out 0.90 N.A., centrable	OPTIKA X-LED™ illuminator. Discussion laser pointer under the head
B-500Ti-5	IOS	Main Head: trino 360°/30° 4 discussion heads: bino 360°/30°	Main head: WF10X/22mm Discussion heads: WF10x/20mm	Infinity Planachromatic 4x, 10x, 40x, 100x (oil)	Quintuple reversed	2-layer mechanical sliding stage, 175x145 mm	Coaxial coarse and fine control knobs	Swing-out 0.90 N.A., centrable	OPTIKA X-LED™ illuminator. Discussion laser pointer under the head

B-500 Series - Accessories

M-625	Eyepiece EWF10x/22mm
M-601	Eyepiece WF15x/16mm
M-602	Eyepiece micrometer EWF10x/22mm
M-005	Micrometric slide 26x76 mm, range 1 mm, div. 0,01 mm
M-501	Objective s-planachromatic 4x/0.10
M-502	Objective s-planachromatic 10x/0.25
M-503	Objective s-planachromatic 20x/0.40
M-504	Objective s-planachromatic 40x/0.65
M-505	Objective s-planachromatic 60x/0.80
M-506	Objective s-planachromatic 100x/1.25 (oil)
M-507	Objective planachromatic 4x/0.10
M-508	Objective planachromatic 10x/0.25
M-509	Objective planachromatic 20x/0.40
M-510	Objective planachromatic 40x/0.65
M-511	Objective planachromatic 60x/0.80
M-512	Objective planachromatic 100x/1.25 (oil)
M-608	Objective IOS planachromatic 4x/0.10
M-609	Objective IOS planachromatic 10x/0.25
M-610	Objective IOS planachromatic 20x/0.40
M-611	Objective IOS planachromatic 40x/0.65
M-611.1	Objective IOS planachromatic 60x/0.80
M-612	Objective IOS planachromatic 100x/1.25 (oil)
M-630	Objective planachromatic for phase contrast 10x/0.25
M-631	Objective planachromatic for phase contrast 20x/0.40
M-632	Objective planachromatic for phase contrast 40x/0.65
M-633	Objective planachromatic for phase contrast 100x/1.25 (oil)
M-760	Objective IOS planachromatic for phase contrast 10x/0.25
M-761	Objective IOS planachromatic for phase contrast 20x/0.40
M-762	Objective IOS planachromatic for phase contrast 40x/0.65
M-763	Objective IOS planachromatic for phase contrast 100x/1.25 (oil)
M-513	Polarizing set (filters only)
M-516	Rotating table for polarizing set
M-618	Darkfield condenser for dry objectives
M-616	Complete phase contrast set with plan obj. 10x, 20x, 40x, 100x (oil)
M-617	Complete phase contrast set with plan IOS obj. 10x, 20x, 40x, 100x (oil)
M-616.1	Set phase contrast, single plan objective 40x
M-617.1	Set phase contrast, single IOS plan objective 40x
M-666	Heating stage, with digital temperature controller
M-619	Photo tube adapter for SLR cameras full frame
M-699	Photo tube adapter for DIGI digital camera series
M-620	CCD camera adapter for 1/3" sensors
M-620.1	CCD camera adapter for 1/2" sensors
M-515	Halogen bulb, with dichroic mirror 12V/20W
M-034	Dust cover type 5
M-975	Blue filter, 45 mm diameter
M-977	Green filter, 45 mm diameter
M-979	Yellow filter, 45 mm diameter
M-989	Frosted glass filter, 45 mm diameter
M-690	Eyecup (pair)
M-173	APS-C reflex camera adapter

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B-600 Series

High-end upright laboratory microscopes

infinifix™ optical system

IOS™ objectives

B-600

B-600 Series

With the B-600 series, OPTIKA Microscopes sets a new record in the quality-to-price ratio. The extraordinary characteristics of a series of highly professional microscopes are now accessible for all laboratories, meeting the needs of those who are looking for a prime quality instrument, without having large budgets.
The B-600 series microscopes are instruments specifically designed to be used in a laboratory, where high optical and mechanical quality as well as sturdiness to guarantee longer life are required. The B-600 microscopes have been designed for the best performance in laboratory use. According to the models, two different optical systems are available.

With InfiniFix optical system, the two worlds of infinity-corrected and 160 mm optical system find the way to meet each other.
With this exclusive optical system all InfiniFix models use a true infinity-corrected optical path, implemented with standard 160 mm objectives.

infinifix™ optical system

IOS simply means "Infinity Optical System".
All IOS models of B-600 series are equipped with true Infinity Corrected Objectives.

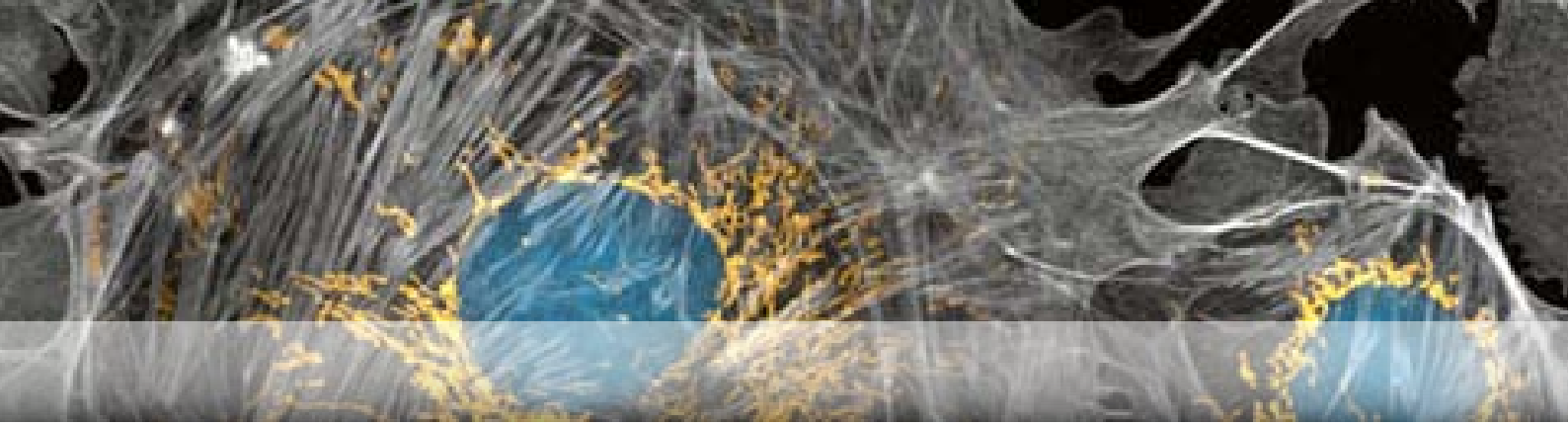
IOS™ objectives

B-600B	Binocular microscope, planachromatic objectives
B-600T	Trinocular microscope, planachromatic objectives
B-600Bph	Binocular microscope, planachromatic objectives for phase contrast
B-600Tph	Trinocular microscope, planachromatic objectives for phase contrast
B-600Bi	Binocular microscope, IOS planachromatic objectives
B-600Ti	Trinocular microscope, IOS planachromatic objectives
B-600Biph	Binocular microscope, IOS planachromatic objectives for phase contrast
B-600Tiph	Trinocular microscope, IOS planachromatic objectives for phase contrast

B-600T

X-LED 8 TM - Never so bright !

OPTIKA is proud to introduce its own latest LED-powered illumination system. Developed by our R&D dept. it consists of a new combination of LED and optical technology. A new high-efficiency matrix-based LED board works in combination with a special optical lens, which allows to double the intensity of the light generated by the LED itself.
The result is a quantity of light equivalent to the light generated by a normal 100W halogen bulb, but with a colour temperature of 6300K. It means white light instead of the yellow one produced by halogen bulbs.
The electrical consumption (8W only) shows the high efficiency of the system: same light intensity with less than 10% of the consumption of a normal halogen bulb.
Last but not least, the lifetime of our LED: 50.000 hours, instead of 1.500 hours.



B-600 Series - Specifications

Optical system & objectives

The B-600 series microscopes are equipped, depending on the various models, with two different types of infinity optical systems: INFINIFIX™ and IOS™.
In both cases the field number of the system is 22 mm. All models in the B-600 series are equipped with plan achromatic objectives.
The models with INFINIFIX™ system are provided with plan achromatic objectives corrected to 160mm. The models with IOS™ system are provided with plan achromatic objectives corrected to infinity. Depending on the models, different sets of objectives are included in the package.

Microscope stand

Modern and ergonomic, this stand is made of die-cast aluminium. Macro and micrometric focusing (graduated, 0.002mm) with coaxial controls.
Adjustable focusing tension and upper sliding stop.

Head

They are available in binocular and in trinocular version suitable for photography/video applications.
Both heads are equipped with interpupillary distance control (51-78 mm) and with dioptric compensation that takes place on the left eyepiece holder tube.
EWF10x/22 eyepieces also suitable for people wearing glasses. All heads are 360° rotatating and 30° inclined. Additionally, a new 30°-60° ergonomical head is available as an accessory.

Condenser

Two kinds of swing-out condensers are available (depending on the model):
- 0.10/1.20 N.A. for better performances with high magnifications;
- 0.22/0.90 N.A. for better performances with low magnifications (pathology)

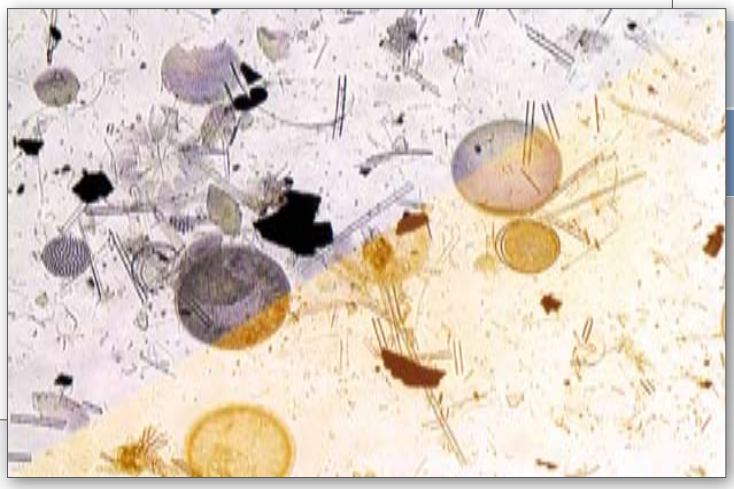
Specimen stage

This large-size (175x145mm) stage is fitted with a graduated translation mechanism (double 0.1mm vernier) operated by a rack-and-pinion system with coaxial controls mounted in a comfortable position beneath the specimen stage.
The object slide clamp accepts up to two specimens at the same time.
The standard rectangular stage may be replaced by a rotating stage for polarized light (optional feature). XY range: 76x51mm.

Illuminators

The B-600 series is equipped with the strongest illumination systems of the OPTIKA range.
Two kinds of illuminators are available and both systems have been designed according to the Köhler scheme with field diaphragm:

- **12V/50W halogen illuminator.**
  Centrable bulb in external case equipped with active cooling system.
- ***X-LED8 ™*** System 8W white LED illuminator.
  Centrable, in external case. For more information about this revolutionary illumination system, please see the previous page.



X-LED 8 ™ **vs. Halogen**

B-600 Series - Models

B-600Tiph

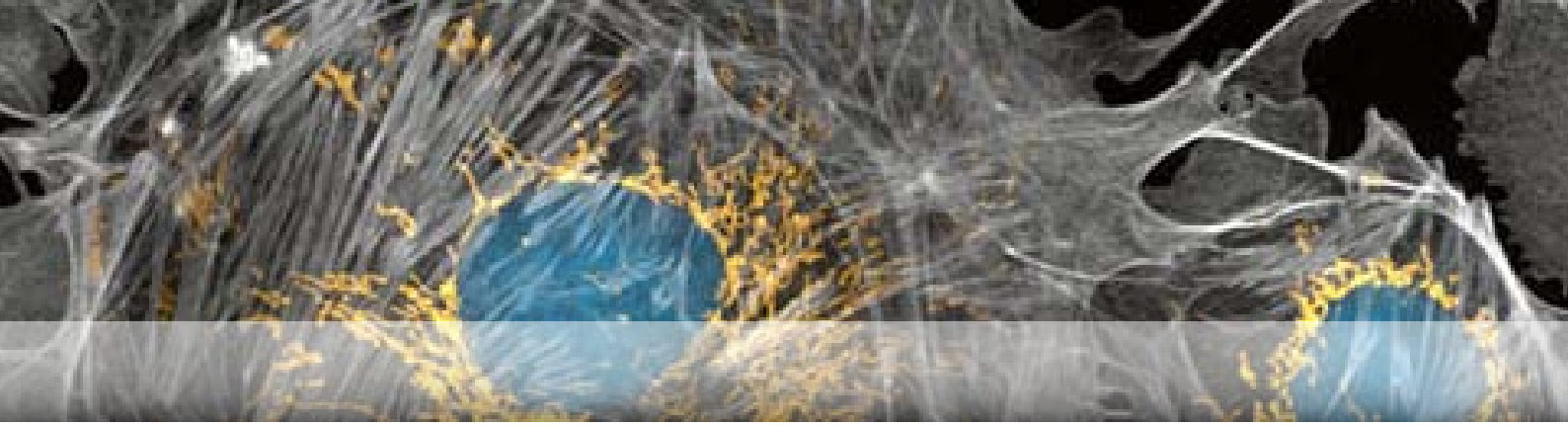
Quintuple reversed
Planachromatic IOS for phase
contrast 10x, 20x, 40x, 100x (oil)

IOS™ objectives

B-600T

Quintuple reversed
Planachromatic
4x, 10x, 40x, 100x (oil)

infinifix™ optical system



B-600 Series - Additional models

B-600TiFL

Quintuple reversed
Planachromatic IOS FLUO
4x, 10x, 20x, 40x

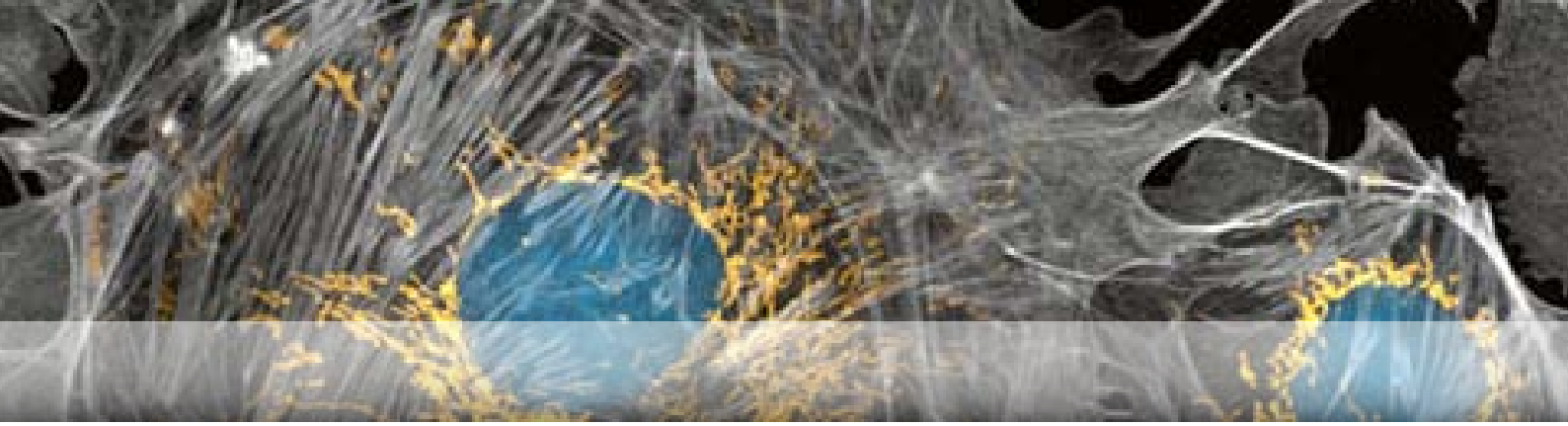
B-600POL

Quadruple reversed
with centering mechanism
for all objectives.
Planachromatic IOS POL
4x, 10x, 20x, 60x

B-600MET

Quintuple reversed
Planachromatic IOS MET
5x, 10x, 20x, 50x, 100x (dry)

B-600 Series - Component scheme



B-600 Series - Technical specifications

Model	Head	Eyepiece	Objectives	Nosepiece	Stage	Focusing	Condenser	Illuminator
B-600B	Binocular 360°rotating 30° inclined	Wide Field 10X / 22 mm	Planachromatic 4x, 10x, 40x, 100x (oil)	Quintuple reversed	2-layer mechanical sliding stage, 175x145 mm	Coaxial coarse and fine system, with limit stop	Swing-out 1.2 N.A., centrable	External high efficiency Halogen 50W dichroic bulb or *X-LED⁸™* system
B-600T	Trinocular 360°rotating 30° inclined	Wide Field 10X / 22 mm	Planachromatic 4x, 10x, 40x, 100x (oil)	Quintuple reversed	2-layer mechanical sliding stage, 175x145 mm	Coaxial coarse and fine system, with limit stop	Swing-out 1.2 N.A., centrable	External high efficiency Halogen 50W dichroic bulb or *X-LED⁸™* system
B-600Bph	Binocular 360°rotating 30° inclined	Wide Field 10X / 22 mm	Planachromatic for phase constrast 10x, 20x, 40x, 100x (oil)	Quintuple reversed	2-layer mechanical sliding stage, 175x145 mm	Coaxial coarse and fine system, with limit stop	1.25 N.A. Abbe type, with centring system, disc condenser for phase contrast	External high efficiency Halogen 50W dichroic bulb or *X-LED⁸™* system
B-600Tph	Trinocular 360°rotating 30° inclined	Wide Field 10X / 22 mm	Planachromatic for phase constrast 10x, 20x, 40x, 100x (oil)	Quintuple reversed	2-layer mechanical sliding stage, 175x145 mm	Coaxial coarse and fine system, with limit stop	1.25 N.A. Abbe type, with centring system, disc condenser for phase contrasts	External high efficiency Halogen 50W dichroic bulb or *X-LED⁸™* system
B-600Bi	Binocular 360°rotating 30° inclined	Wide Field 10X / 22 mm	Planachromatic IOS 4x, 10x, 20x, 40x, 100x (oil)	Quintuple reversed	2-layer mechanical sliding stage, 175x145 mm	Coaxial coarse and fine system, with limit stop	Swing-out 0.90 N.A., centrable	External high efficiency Halogen 50W dichroic bulb or *X-LED⁸™* system
B-600Ti	Trinocular 360°rotating 30° inclined	Wide Field 10X / 22 mm	Planachromatic IOS 4x, 10x, 20x, 40x, 100x (oil)	Quintuple reversed	2-layer mechanical sliding stage, 175x145 mm	Coaxial coarse and fine system, with limit stop	Swing-out 0.90 N.A., centrable	External high efficiency Halogen 50W dichroic bulb or *X-LED⁸™* system
B-600Biph	Binocular 360°rotating 30° inclined	Wide Field 10X / 22 mm	Planachromatic IOS for phase constrast 10x, 20x, 40x, 100x (oil)	Quintuple reversed	2-layer mechanical sliding stage, 175x145 mm	Coaxial coarse and fine system, with limit stop	1.25 N.A. Abbe type, with centring system, disc condenser for phase contrast	External high efficiency Halogen 50W dichroic bulb or *X-LED⁸™* system
B-600Tiph	Trinocular 360°rotating 30° inclined	Wide Field 10X / 22 mm	Plan Achromatic IOS for phase constrast 10x, 20x, 40x, 100x (oil)	Quintuple reversed	2-layer mechanical sliding stage, 175x145 mm	Coaxial coarse and fine system, with limit stop	1.25 N.A. Abbe type, with centring system, disc condenser for phase contrast	External high efficiency Halogen 50W dichroic bulb or *X-LED⁸™* system

B-600 Series - Accessories

M-680	Ergo binocular head 30°-60°
M-625	Eyepiece EWF10x/22mm
M-601	Eyepiece WF15x/16mm
M-602	Eyepiece micrometer EWF10x/22mm
M-005	Micrometric slide, 26x76 mm, range 1 mm, div. 0,01 mm
M-603	Objective planachromatic 4x/0.10
M-604	Objective planachromatic 10x/0.25
M-605	Objective planachromatic 20x/0.40
M-606	Objective planachromatic 40x/0.65
M-689	Objective planachromatic 60x/0.80
M-607	Objective planachromatic 100x/1.25 (oil)
M-608	Objective IOS planachromatic 4x/0.10
M-609	Objective IOS planachromatic 10x/0.25
M-610	Objective IOS planachromatic 20x/0.40
M-611	Objective IOS planachromatic 40x/0.65
M-611.1	Objective IOS planachromatic 60x/0.85
M-612	Objective IOS planachromatic 100x/1.25 (oil)
M-630	Objective planachromatic for phase contrast 10x/0.25
M-631	Objective planachromatic for phase contrast 20x/0.40
M-632	Objective planachromatic for phase contrast 40x/0.65
M-633	Objective planachromatic for phase contrast 100x/1.25 (oil)
M-760	Objective IOS planachromatic for phase contrast 10x/0.25
M-761	Objective IOS planachromatic for phase contrast 20x/0.40
M-762	Objective IOS planachromatic for phase contrast 40x/0.65
M-763	Objective IOS planachromatic for phase contrast 100x/1.25 (oil)
M-613	Polarizing set (filters only)
M-615	Lambda filter for polarizing set
M-614	Rotating table for polarising set
M-618	Darkfield condenser for dry objectives
M-616	Complete phase contrast set with plan obj. 10x, 20x, 40x, 100x (oil)
M-616.1	Set phase contrast, single plan objective 40x
M-617	Complete phase contrast set with plan IOS obj. 10x, 20x, 40x, 100x (oil)
M-617.1	Set phase contrast, single IOS plan objective 40x
M-666	Heating stage, with digital temperature controller
M-619	Photo tube adapter for SLR cameras full frame
M-699	Photo tube adapter for DIGI digital camera series
M-620	CCD camera adapter for 1/3" sensors
M-620.1	CCD camera adapter for 1/2" sensors
M-621	Halogen bulb 6V/30W
M-622	Halogen bulb 12V/50W
M-034	Dust cover type 5
M-975	Blue filter, 45 mm diameter
M-977	Green filter, 45 mm diameter
M-979	Yellow filter, 45 mm diameter
M-989	Frosted glass filter, 45 mm diameter
M-690	Eyecup (pair)
M-173	APS-C reflex camera adapter

B-600 Series - Photo-video applications

The B-600 series can be connected to our Optikam and DIGI systems by using an additional accessory (M-699).
For T-mount (reflex) and C-mount cameras, specific adaptors are readily available (according to the adapter chart).

OPTIKAM

DIGI

CAMERA ADAPTER CHART FOR TRINOCULAR MODELS

*T/2 is not supplied by OPTIKA

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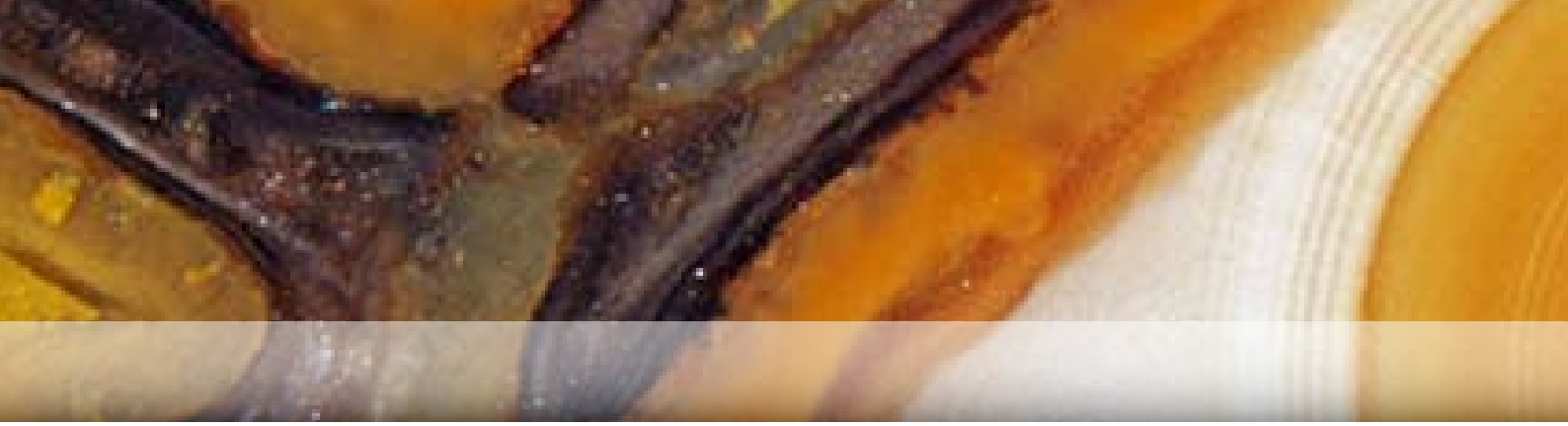
Alpha Optika Microscopes Hungary
2030 ÉRD, Kaktusz u. 22.- HUNGARY - Tel.: (23) 520-077 Fax: (23) 374-965

POL Series

Laboratory polarizing microscopes

POL



POL Series

Polarized light microscopy provides all the benefits of brightfield microscopy and yet offers a wealth of information, which is simply not available with any other optical microscopy technique, such as refractive indices, birefringence, retardation, extinction angle, pleochroism.
Polarized light microscopy is best known for its geological applications – primarily for the study of minerals in rock thin sections, but it can also be used to study many other materials.
OPTIKA polarizing microscopes offer a complete system for your laboratory analysis, including polarizer and analyzer filters, Bertrand lens for conoscopic observation, compensator plates, and high-precision rotatable stages.
Also available the X-LED illumination system, an high-intensity light source which delivers bright and clear images.
The extraordinary characteristics of this series are now accessible to all laboratories, meeting the needs of those who are looking for a prime quality instrument.

B-353POL - Technical specifications

Part	Description
Head	Trinocular, 30° inclined, 360° rotating.
Eyepiece	WF10X/20mm and with cross hair and micrometer
Bertrand lens	Swing-out type; centrable.
Polarizing attachment	0°-90° rotating analysing filter. Tint plates included: 1° order red (lambda), lambda/4, quartz wedge.
Nosepiece	5-positions with centering mechanism for all objectives.
Objectives	Achromatic POL (strain-free): 4x/0.10, 10x/0.25, 25x/0.40, 40x/0.65, 63x/0.85.
Magnifications	40x, 100x, 250x, 400x, 630x.
Focusing system	Coaxial coarse and fine.
Stage	160mm dia.; 360° rotating with stop knob and 0.1° vernier.
Condenser	1.25 N.A., with iris diaphragm, focusable and centrable. With rotating polarising filter.
Illumination	X-LED™ illumination system with brightness control.

POL Series - Technical specifications

B-600POL - Technical specifications

Part	Description
Head	Trinocular, 30° inclined, 360° rotating.
Eyepiece	WF10X/22mm
Bertrand lens	Swing-out type; centrable (for Conoscopy/Orthoscopy)
Polarizing attachment	Blue filter, 0°-90° rotating analysing filter, l slip (first class red), 1/4 l slip, quartz wedge
Nosepiece	4-positions with centering mechanism for all objectives
Objectives	PLAN IOS POL (strain-free) 4x/0.10, 10x/0.25, 40x/0.65, 60x/0.85
Magnifications	40x, 100x, 400x, 600x
Focusing system	Coaxial coarse and fine
Stage	160mm diameter; 360° rotating with stop knob and 0.1° vernier
Condenser	1.2 N.A., with iris diaphragm, focusable and centrable. With rotating polarizing filter (swing-out type)
Illumination	External high efficiency halogen 50W dichroic bulb or X-LED^{8}™ system for transmitted light

B-600POL-I - Technical specifications

Part	Description
Head	Trinocular, 30° inclined, 360° rotating
Eyepiece	WF10X/22mm
Bertrand lens	Swing-out type; centrable (for Conoscopy/Orthoscopy)
Polarizing attachment	Blue filter, 0°-90° rotating analysing filter, l slip (first class red), 1/4 l slip, quartz wedge
Nosepiece	4-positions with centering mechanism for all objectives
Objectives	LWD PLAN IOS POL (strain-free) for transmitted and incident polarized light 5x/0.15, 10x/0.25, 20x/0.40, 50x/0.70
Magnifications	50x, 100x, 200x, 500x
Focusing system	Coaxial coarse and fine
Stage	160mm diameter; 360° rotating with stop knob and 0.1° vernier
Condenser	1.2 N.A., with iris diaphragm, focusable and centrable. With rotating polarizing filter (swing-out type)
Illumination	Transmitted light: external high efficiency halogen 50W dichroic bulb or X-LED^{8}™ system. Incident light: polarizing attachment with built-in polarizer filter, aperture diaphragm and field diaphragm; external high efficiency halogen 50W dichroic bulb or X-LED^{8}™ system

POL Series - Accessories

ACCESSORIES FOR B-353POL

M-301	Eyepiece high-point WF10x/20mm
M-302	Eyepiece high-point WF16x/12mm
M-303	Eyepiece micrometer high-point WF10x/20mm
M-005	Micrometric slide, 26x76 mmm, range 1 mm, div. 0,01 mm
M-390	Objective POL achromatic 4x/0.10
M-391	Objective POL achromatic 10x/0.25
M-392	Objective POL achromatic 25x/0.40
M-393	Objective POL achromatic 40x/0.65
M-394	Objective POL achromatic 63x/0.80
M-365	Photo tube adapter for SLR cameras full frame
M-366	CCD camera adapter
M-031	Dust cover type 3
M-974	Blue filter, 32 mm diameter
M-976	Green filter, 32 mm diameter
M-978	Yellow filter, 32 mm diameter
M-988	Frosted glass filter, 32 mm diameter
M-173	APS-C reflex camera adapter

ACCESSORIES FOR B-600POL / B-600POL-I

M-680	Ergo binocular head 30°- 60°
M-625	Eyepiece EWF10x/22mm
M-601	Eyepiece WF15x/16mm
M-602	Eyepiece micrometer EWF10x/22mm
M-005	Micrometric slide, 26x76 mm, range 1 mm, div. 0,01 mm
M-691	Objective IOS POL planachromatic 4x/0.10 for B-600POL
M-692	Objective IOS POL planachromatic 10x/0.25 for B-600POL
M-693	Objective IOS POL planachromatic 40x/0.65 for B-600POL
M-694	Objective IOS POL planachromatic 60x/0.80 for B-600POL
M-695	Objective IOS POL LWD planachromatic 5x for B-600POL-I
M-696	Objective IOS POL LWD planachromatic 10x for B-600POL-I
M-697	Objective IOS POL LWD planachromatic 20x for B-600POL-I
M-688	Objective IOS POL LWD planachromatic 50x for B-600POL-I
M-619	Photo tube adapter for SLR cameras full frame
M-699	Photo tube adapter for DIGI digital camera series
M-620	CCD camera adapter for 1/3" sensors
M-620.1	CCD camera adapter for 1/2" sensors
M-622	Halogen bulb 12V/50W
M-034	Dust cover type 5
M-975	Blue filter, 45 mm diameter
M-977	Green filter, 45 mm diameter
M-979	Yellow filter, 45 mm diameter
M-989	Frosted glass filter, 45 mm diameter
M-690	Eyecup (pair)
M-173	APS-C reflex camera adapter

OPTIKA SRL
Via Rigla, 30 - 24010 Ponteranica (BG) - ITALIA - Tel.: +39 035 571392 (6 linee r.a.) Fax: +39 035 571435 - info@optikamicroscopes.com

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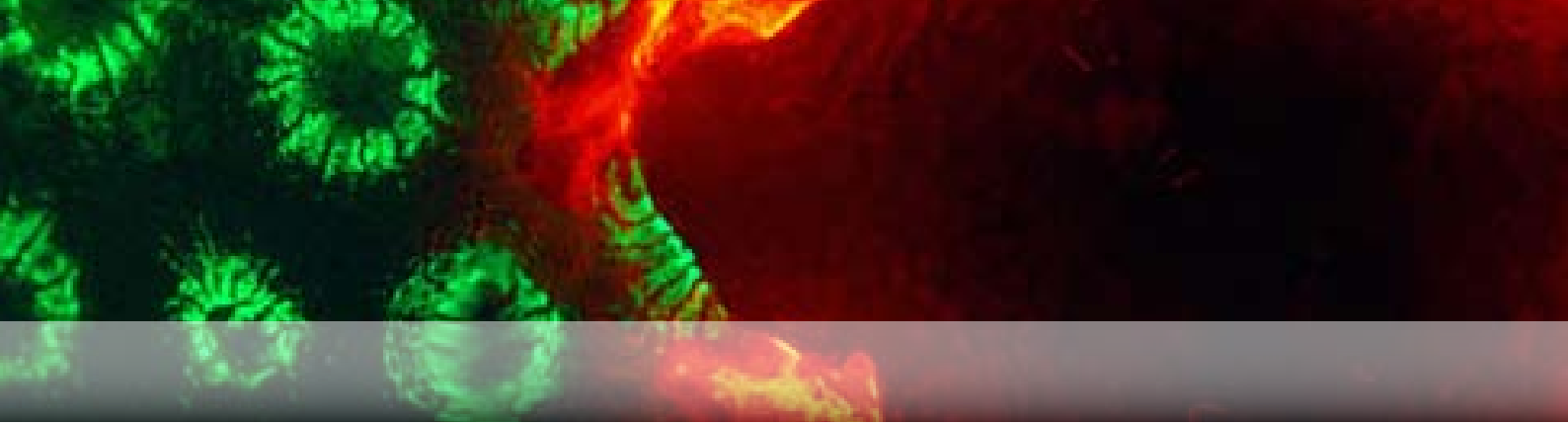
FLUO Series

Upright and inverted epi-fluorescence microscopes

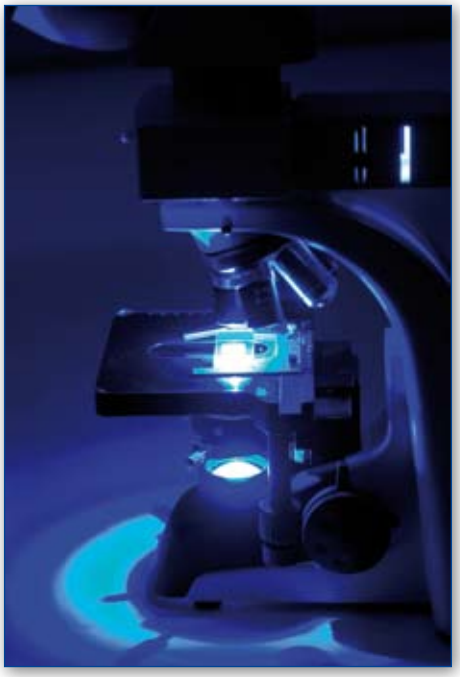
IOS™ objectives

FLUO



FLUO Series - LED Fluorescence

A complete range of microscopes, designed to meet your needs in fluorescence microscopy.
Quality, innovative technology, power, safety and simplicity of use are the common characteristics of these instruments.



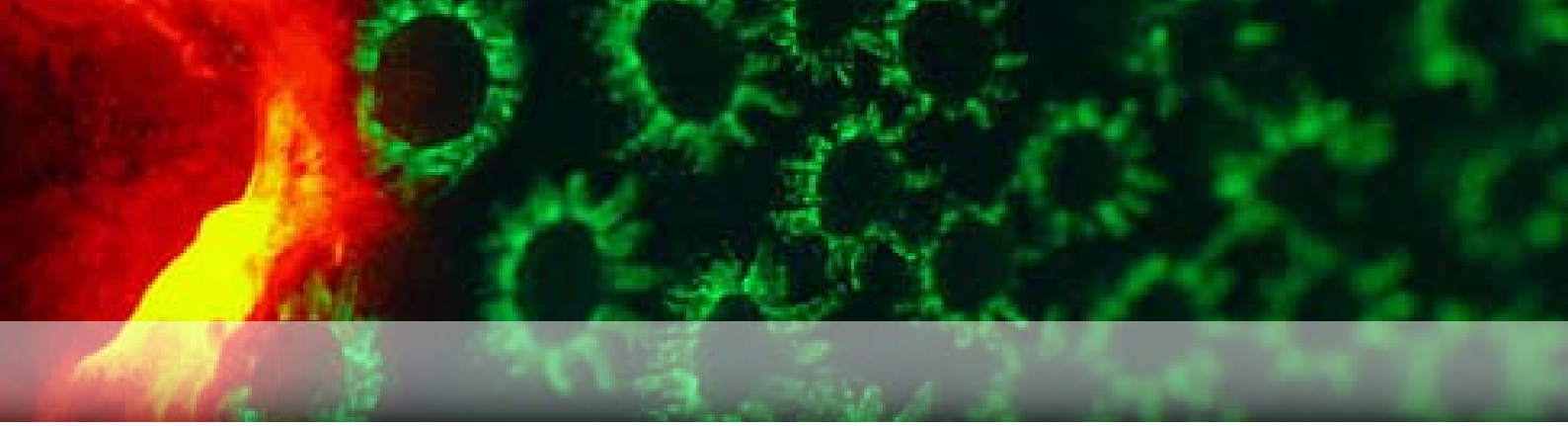
Imagine a fluorescence microscope that needs a lamp change every **50.000 hours**.
Imagine a fluorescence microscope with a cold light source that barely heats up during use.
Imagine a fluorescence microscope that can be switched on, used immediately, switched off and then back on again.
Imagine a fluorescence microscope that is so safe as to need no protection shield whatsoever, and that can be used by everyone, without any specific precaution.
Imagine a fluorescence microscope that can be powered by batteries, as easily as a torchlight.
Imagine a fluorescence microscope that is so sturdy and so compact that it can be used on the field, without any transport problems.
You may think that such an instrument exists in your imagination only.
Actually, such microscope is real, and its name is **OPTIKA B-353LD.**
Developed by the OPTIKA Research labs, the **B-353LD** marks a revolution in the field of fluorescence microscopy.
Strictly derived from the **B-353FL** model, of which it shares the body, the optics and the filter sets, the **B-353LD** employs high-power LED instead of the classical mercury vapour bulb.
The LED is tailored to the specific applications (FITC-TRITC).
The brightfield illuminator uses our *X-LED™* system, and the colour temperature closely matches sunlight. The microscope is available in two versions: **B-353LD1** and **B-353LD2**

B-353LD1 - Technical specifications

Part	Description
Optical system	Mechanical tube lenght: IOS - Infinity Optical System; parfocal distance 45 mm.
Head	Trinocular, 30° inclined, 360° rotating. Diopter adjustment; interpupillary distance adjustment 55-75 mm.
Eyepieces	Wide Field WF10x/20 mm.
Nosepiece	5-position reversed revolving nosepiece. Ball bearing linear guides.
Objectives	IOS Planachromatic 4x/0.1, 10x/0.25, 20x/0.40, 40x/0.65 and 50x/0.75 (no cover slide).
Specimen stage	Double layer with mechanical sliding stage, 160x142 mm; moving range 76x52 mm.
Focusing system	Rack and pinion mechanism, with coaxial coarse and fine control knobs. Fine adjustment graduation 0.002 mm. Vertical movement range: 20 mm. Tension control on left side; upper stage drive stop on right side.
Condenser	Centrable Abbe condenser with double lens. N.A. 1.25. Fitted with iris diaphragm and filter holder. Height adjustment by a rack and pinion mechanism.
Illumination	*X-LED™* unit for transmitted light. High power blue LED unit for epi-fluorescence (for standard use with B).

Standard filterset

Name	Excitation wavelength (nm)	Dichroic mirror cut-off (nm)	Barrier filter cut-off (nm)
B (Blue)	450 – 480	500	515



FLUO Series - LED Fluorescence

B-353LD2 - Technical specifications

Part	Description
Optical system	Mechanical tube lenght: IOS - Infinity Optical System; parfocal distance 45 mm.
Head	Trinocular, 30° inclined, 360° rotating. Diopter adjustment; interpupillary distance adjustment 55-75 mm.
Eyepieces	Wide Field WF10x/20 mm.
Nosepiece	5-position reversed revolving nosepiece. Ball bearing linear guides.
Objectives	IOS Planachromatic 4x/0.1, 10x/0.25, 20x/0.40, 40x/0.65 and 50x/0.75 (no cover slide).
Specimen stage	Double layer with mechanical sliding stage, 160x142 mm; moving range 76x52 mm.
Focusing system	Rack and pinion mechanism, with coaxial coarse and fine control knobs. Fine adjustment graduation 0.002 mm. Vertical movement range: 20 mm. Tension control on left side; upper stage drive stop on right side.
Condenser	Centrable Abbe condenser with double lens. N.A. 1.25. Fitted with iris diaphragm and filter holder. Height adjustment by a rack and pinion mechanism.
Illumination	*X-LED*^{TM} unit for transmitted light. High power LED unit for epi-fluorescence (for standard use with B and G).

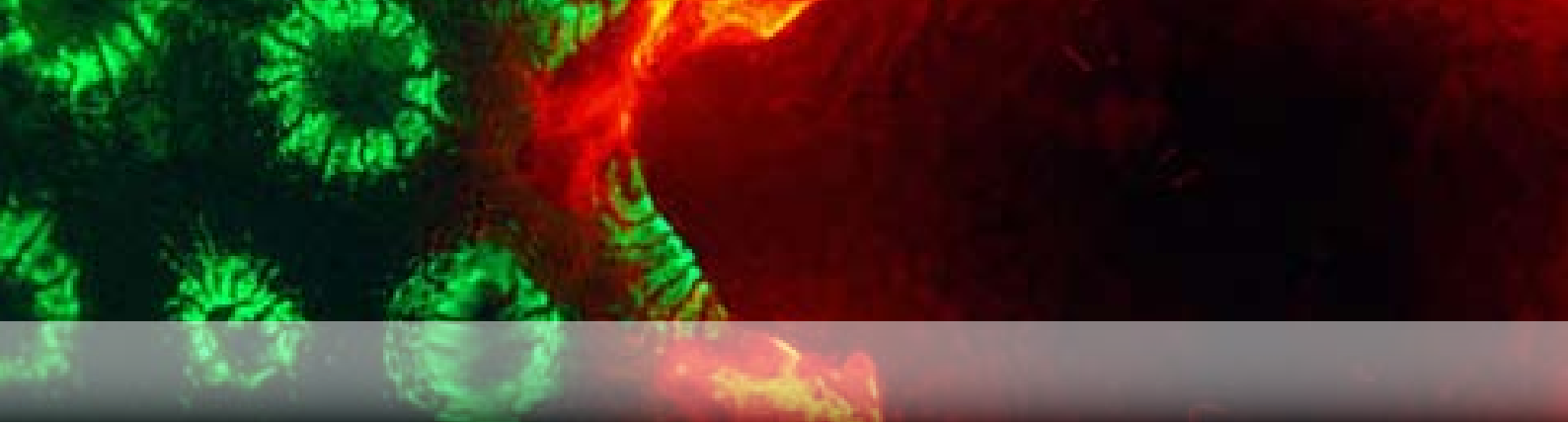
Standard filtersets

Name	Excitation wavelength (nm)	Dichroic mirror cut-off (nm)	Barrier filter cut-off (nm)
B (Blue)	450 – 480	500	515
G (Green)	510 – 550	570	590

FLUO Series - HBO Fluorescence attachment for szp stereomicroscope

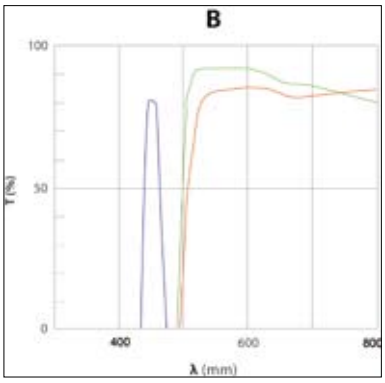
SZP-FL

Part	Description
Description	Fluorescence attachment for SZP stereomicroscopes. Fluorescence observation for biology, industrial inspection, criminal justice, etc. Essential tool for security printing and mineral research.
Optical system	Parallel optical system (SZP system)
Filterset	Standard: GFP-B (EX460-500, DM505, BA510-560) GFP-L (EX460-500, DM505, BA510) Optional: CFP-B (EX430-450, DM455, BA465-495) YFP-B (EX490-510, DM525, BA530-560) G (EX515-550, DM570, BA590) RFP-B (EX525-555, DM570, BA585)
Illumination	100W HBO high-pressure mercury vapor bulb. Average lamp lifetime: 400 hours. Input voltage: 110/240Vac, 50/60Hz, 1A ; Fuse: F8AL 250V. Maximum input power: 125W. Current and time counter LED displays.
Photo&Video Attachment	Optional

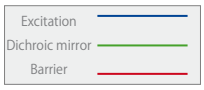


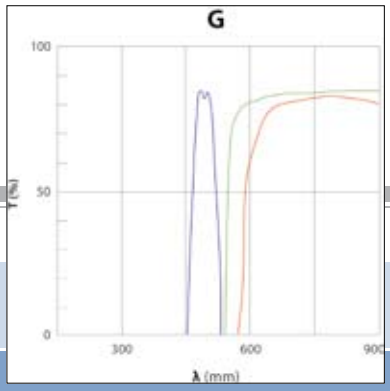
FLUO Series - LED Fluorescence

Updated version with automatic LED switching

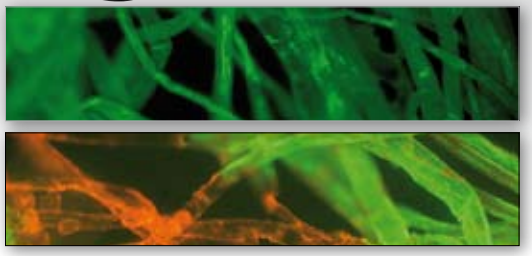


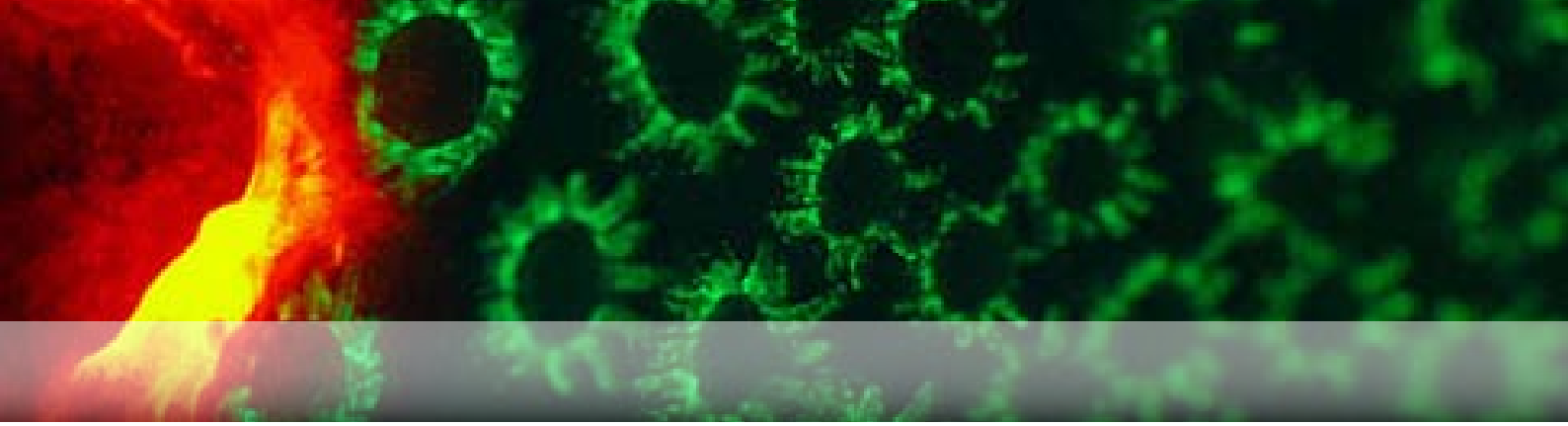
When a filter is inserted, fluorescence LED automatically switches on, while brightfield LED switches off





LED FLUORESCENCE





FLUO Series - HBO Fluorescence

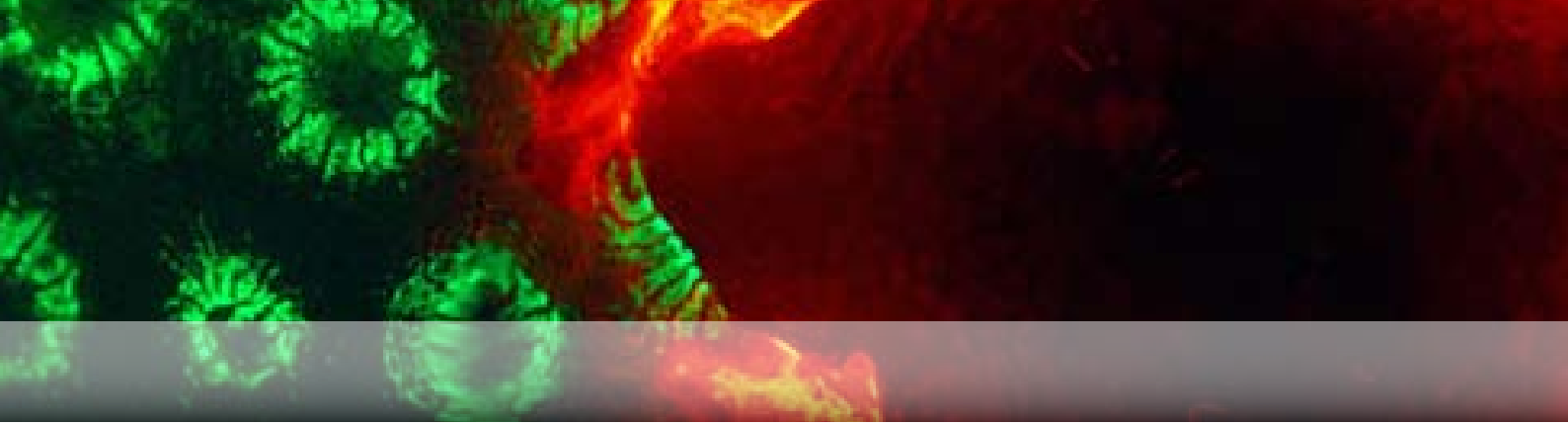
B-353FL - Technical specifications

Part	Description
Optical system	Mechanical tube lenght: IOS - Infinity Optical System; parfocal distance 45 mm.
Head	Trinocular, 30° inclined, 360° rotating. Diopter adjustment; interpupillary distance adjustment 55-75 mm.
Eyepieces	Wide Field 10x/20 mm.
Nosepiece	5-position reversed revolving nosepiece. Ball bearing linear guides.
Objectives	IOS Planachromatic 4x/0.1, 10x/0.25, 20x/0.40, 40x/0.65 and 100x/1.25 (oil).
Specimen stage	Double layer with mechanical sliding stage, 160x142 mm; moving range 76x52 mm.
Focusing system	Rack and pinion mechanism, with coaxial coarse and fine control knobs. Fine adjustment graduation 0.002 mm. Vertical movement range: 20 mm. Tension control on left side; upper stage drive stop on right side.
Condenser	Centrable Abbe condenser with double lens. N.A. 1.25. Fitted with iris diaphragm and filter holder. Height adjustment by a rack and pinion mechanism.
Illumination	*X-LED*^{TM} unit for transmitted light. HBO 100W high pressure mercury bulb for epi-fluorescence.

Standard filtersets

Name	Excitation wavelength (nm)	Dichroic mirror cutoff (nm)	Barrier filter cutoff (nm)
B (Blue)	450 – 480	500	515
G (Green)	510 – 550	570	590

B-353FL



FLUO Series - HBO Fluorescence

B-600TiFL - Technical specifications

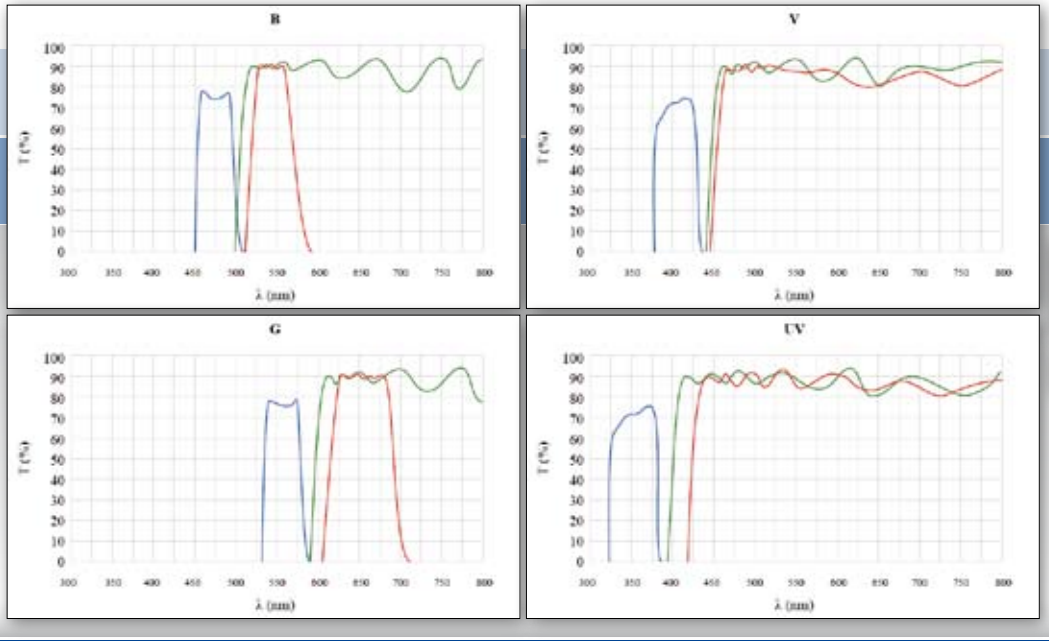
Part	Description
Optical system	Mechanical tube lenght: IOS - Infinity Optical System; parfocal distance 45 mm.
Head	Trinocular, 30° inclined, 360° rotating. Diopter adjustment; interpupillary distance adjustment 55-75 mm.
Eyepieces	Wide Field 10x/22 mm.
Nosepiece	5-position reversed revolving nosepiece. Ball bearing linear guides.
Objectives	IOS Planachromatic FLUO 4x/0.1, 10x/0.25, 20x/0.40, 40x/0.65
Specimen stage	Double layer with mechanical sliding stage, 175x145 mm; moving range 76x51 mm.
Focusing system	Rack and pinion mechanism, with coaxial coarse and fine control knobs. Fine adjustment graduation 0.002 mm. Vertical movement range: 20 mm. Tension control on right side; upper stage drive stop on left side.
Condenser	Centrable Abbe condenser (swing-out type) with double lens. N.A. 0.9 Fitted with iris diaphragm. Height adjustment by a rack and pinion mechanism.
Illumination	External 12V/50W with halogen bulb, fan-cooled case, centering system. Field diaphragm. Full Köhler system. Optional: X-Led[8] illumination. HBO 100W high pressure mercury bulb for epi-fluorescence.

Standard filters (in bundle)

Name	Excitation wavelength (nm)	Dichroic mirror cut-off (nm)	Barrier filter cut-off (nm)
B (Blue)	450-500	505	510-560
G (Green)	530-590	595	610-680

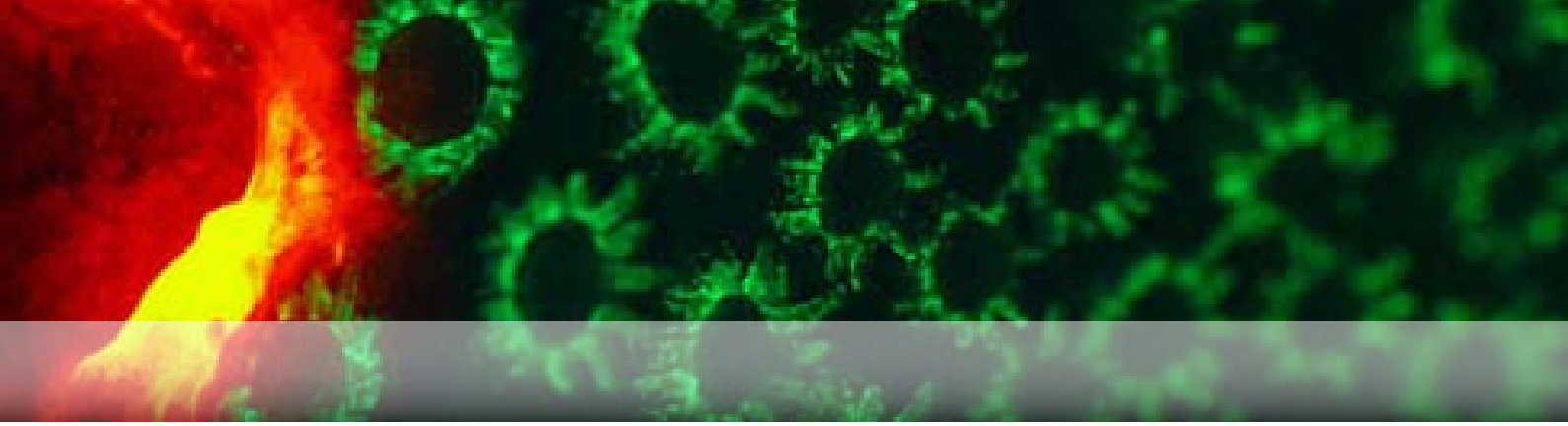
Additional filters (as option)

Name	Excitation wavelength (nm)	Dichroic mirror cut-off (nm)	Barrier filter cut-off (nm)
V (Violet)	385-425	440	455LP
UV	325-375	400	420LP

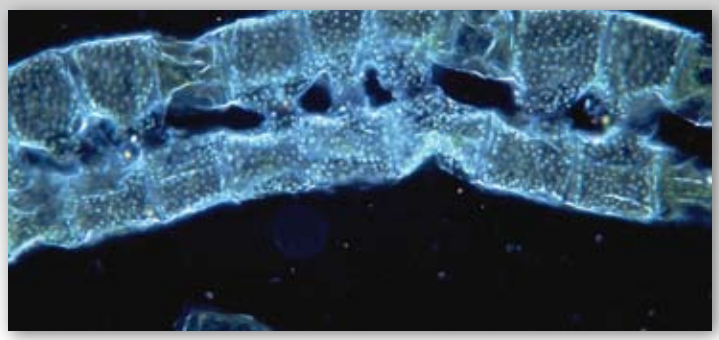


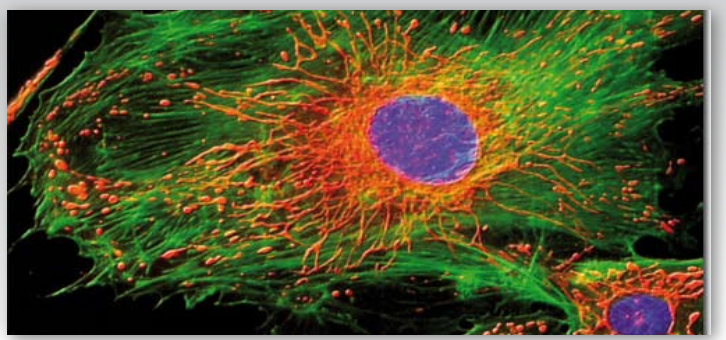
MANY MORE FILTERSETS AVAILABLE ON REQUEST

CHROMA TECHNOLOGY CORP
THE WORLD'S FINEST OPTICAL FILTERS

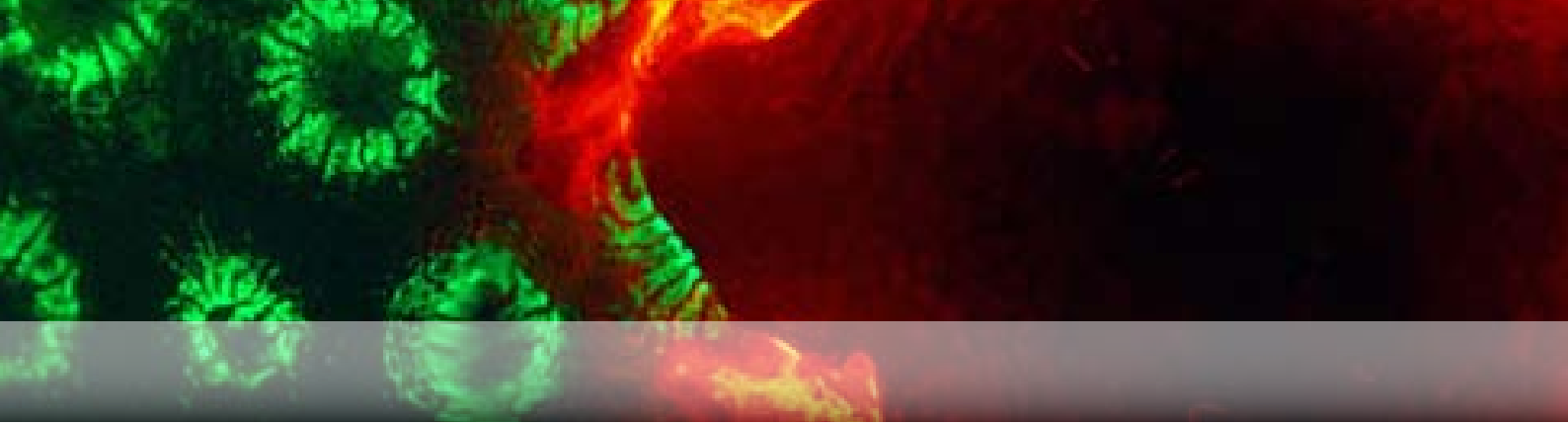


FLUO Series - HBO Fluorescence





HB100W high-pressure mercury bulb for fluorescence



FLUO Series - HBO Fluorescence

The instrument

XDS-2FL is a routine inverted epifluorescence microscope. The basic structure is dedicated to the most demanding applications of routine fluorescence analysis. XDS-2FL offers, in the same unit, brightfield and phase contrast capabilities, thus extending its potentials to most multi-contrast applications.

Optical system

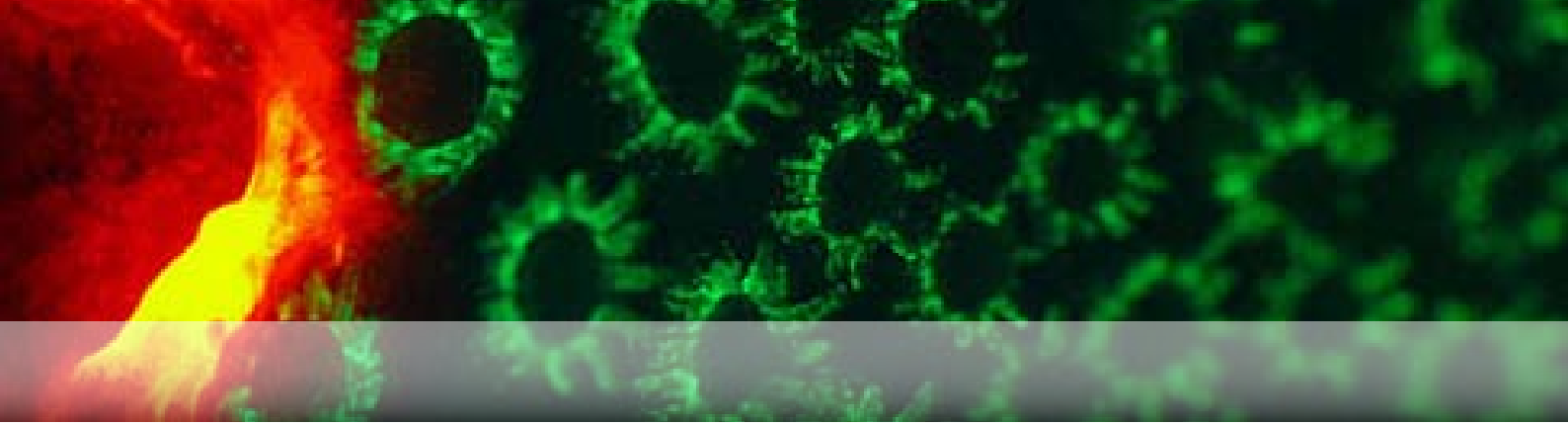
The epifluorescence optical system is implemented via the standard excitation filter-dichroic mirror-barrier filter combination, applied to a 100W Hg lamp. It is supplied with EWF10x/22mm extra-widefield eyepieces, long working distance IOS objectives, and a double filterblock set (blue and green excitation). The extensive range of optional accessories allows a quick interchange of contrast mechanisms, and it is optimized for multi-contrast observation without removal of the specimen from the stage.

User comfort

XDS-2 is comfortable for the operator. The 22 mm extra-wide field is pleasant to use, and minimizes operator stress. The special eyepieces are designed for eyeglass wearers.

Ergonomy

Every control is easy to reach, every component has been designed with ease of use in mind. The focusing and specimen translation controls are designed to allow to rest the wrists on the table. The brightfield light intensity regulation is placed very close to the focusing knobs. The specimen stage is fitted with a special glass insert, that allows to see the objectives, for immediate identification of the magnification setup.
The head implements an extremely innovative design, that permits adjustment to compensate for operator height.



FLUO Series - HBO Fluorescence

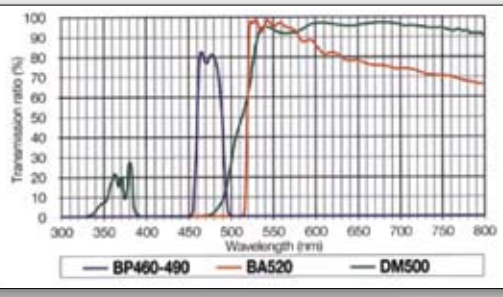
XDS-2FL - Technical specifications

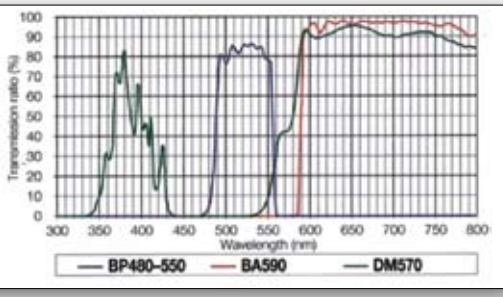
Part	Description
Optical system	Infinity corrected system, 45 mm parfocality distance. Field number 22 mm.
Head	Trinocular: 30° inclined, 360° rotating. Interpupillary distance: 48 - 75 mm. Adjustable dioptric compensation. Ergonomical head available as option.
Eyepieces	Extra-wide field10x/22mm, High-point.
Nosepiece	5 positions, with bidirectional rotation on ball bearings and click stop.
Objectives	Long working distance (LWD) infinity corrected (IOS) planachromatic: 4x/0.10 (working distance 18 mm), 10x/0.25 with phase ring (working distance 10 mm), 20x/0.40 with phase ring (working distance 5.1 mm), 40x/0.60 (working distance 2.6 mm). Corrected for 1.2 mm coverglass).
Specimen stage	Size: 250 x 230 mm. Translator with lowered ergonomic coaxial controls. X-Y translation: 119 x 70 mm. Interchangeable metallic inserts for specimen slides, Petri dishes and flasks.
Focusing system	Macro- and micrometric regulation, with coaxial knobs on both sides of the stand. Adjustable tension.
Condenser	Long working distance condenser, numerical aperture 0.30, working distance 72 mm. The condenser can be removed in order to increase the working distance to 150 mm.
Illumination	6V / 30W halogen precentered illuminator, with adjustable intensity, filter and phase ring holder and aperture diaphragm. Inverted epifluorescence: HBO 100W high pressure mercury bulb, knobs for lamp and back mirror alignment.
Filtersets	Blue and Green fluorescence filtersets. No other as option.

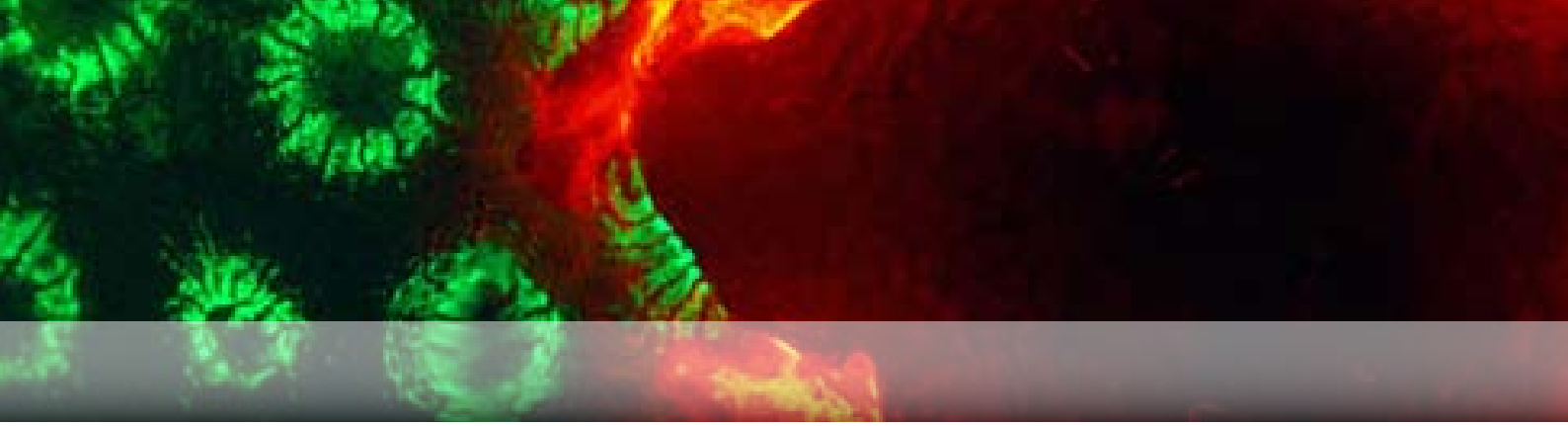
Filter sets

		Excitation	Dichroic Mirror	Barrier Filter
Filter sets	Blue excitation	BP460-490	DM500	BA520
	Green excitation	BP480-550	DM570	BA590

STANDARD FILTERS







FLUO Series - HBO Fluorescence

The instrument

XDS-3FL is an advanced inverted epifluorescence microscope.

Thanks to its special FLUO objectives, designed with quartz and special glasses (low in auto-fluorescence), XDS-3FL is upgradable with every kind of fluorescence filterset. The instrument offers, in the same unit, brightfield and phase contrast capabilities, thus extending its potentials to most multi-contrast applications.

Optical system

The epifluorescence optical system is implemented via the standard excitation filter-dichroic mirror-barrier filter combination, applied to a 100W Hg lamp. It is supplied with EWF10x/22mm extra-widefield eyepieces, long working distance IOS FLUO objectives, and a double filterblock set (blue and green excitation as standard configuration). The extensive range of optional accessories allows a quick interchange of contrast mechanisms, and it is optimized for multi-contrast observation without removal of the specimen from the stage.

Ergonomy

Every control is easy to reach, every component has been designed with ease of use in mind. The focusing and specimen translation controls are designed to allow to rest the wrists on the table.

The brightfield light intensity regulation is placed very close to the focusing knobs.

The specimen stage is fitted with a special glass insert, that allows to see the objectives, for immediate identification of the magnification setup.

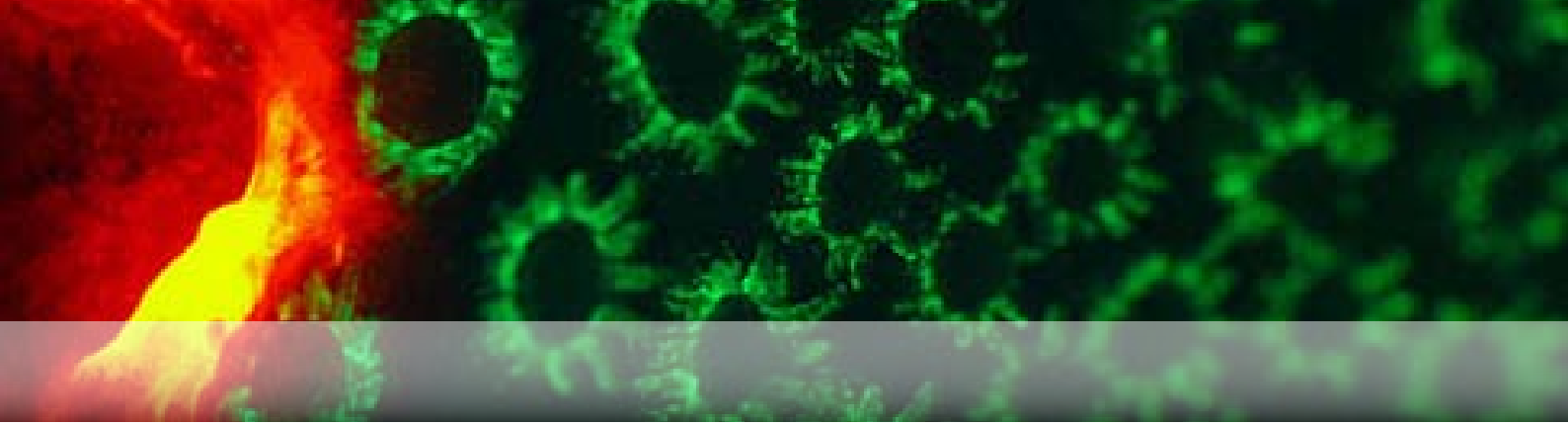
User comfort

XDS-3FL is comfortable for the operator.

The 22 mm extra-wide field is pleasant to use, and minimizes operator stress. The special eyepieces are designed for eyeglass wearers.

XDS-3FL

XDS-3FL4



FLUO Series - HBO Fluorescence

XDS-3FL - Technical specifications

Part	Description
Optical system	Infinity corrected system, 45 mm parfocality distance. Field number 22 mm.
Head	Trinocular: 45° inclined. Interpupillary distance: 48 - 75 mm. Adjustable dioptric compensation.
Eyepieces	Extra-wide field 10x/22mm, High-point.
Nosepiece	5 positions, with bidirectional rotation on ball bearings and click stop.
Objectives	Long working distance (LWD) infinity corrected (IOS) planachromatic: FLUO 10X/0.3 (working distance 10 mm), FLUO 20X/0.45 (working distance 5.1 mm), FLUO 40X/0.65 (working distance 2.6 mm). Corrected for 1.2 mm coverglass.
Specimen stage	Size: 250 x 230 mm. Translator with lowered ergonomic coaxial controls. X-Y translation: 119 x 70 mm. Interchangeable metallic inserts for specimen slides, Petri dishes and flasks.
Focusing system	Macro- and micrometric regulation, with coaxial knobs on both sides of the stand. Adjustable tension.
Condenser	Long working distance condenser, numerical aperture 0.30, working distance 72 mm. The condenser can be removed in order to increase the working distance to 150 mm. Green IF550 filter and Blue LBD filter are provided.
Illumination	LED inverted epifluorescence: HBO 100W high pressure mercury bulb, knobs for lamp alignment.
Filtersets	Blue and Green fluorescence filtersets. Violet and Ultraviolet as optional accessories.

XDS-3FL4 - Same as XDS-3FL with 4 positions filter holder (Blue and Green filtersets, plus 2 empty positions)

Filter sets

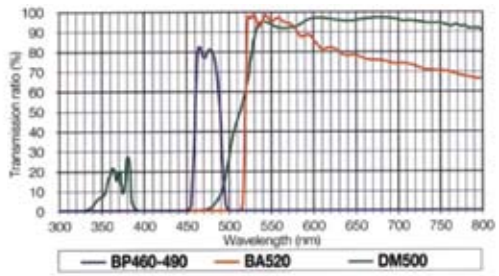
	Excitation	Dichroic Mirror	Barrier Filter
Blue excitation	BP460-490	DM500	BA520
Green excitation	BP480-550	DM570	BA590
Ultraviolet excitation	BP325-375	DM400	BA420LP
Violet excitation	BP385-425	DM440	BA455LP

MANY MORE FILTERSETS AVAILABLE ON REQUEST

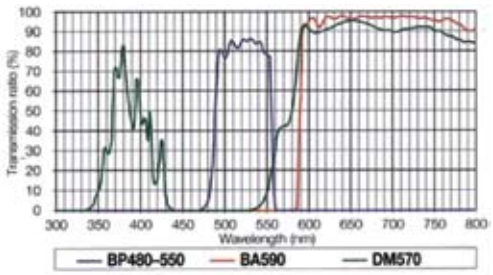
CHROMA TECHNOLOGY CORP
THE WORLD'S FINEST OPTICAL FILTERS

STANDARD FILTERS

Blue excitation

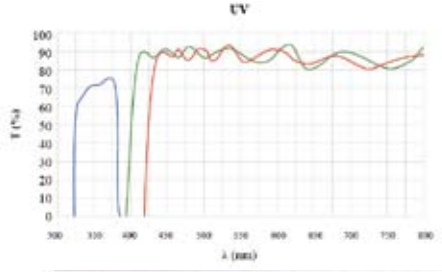


Green excitation

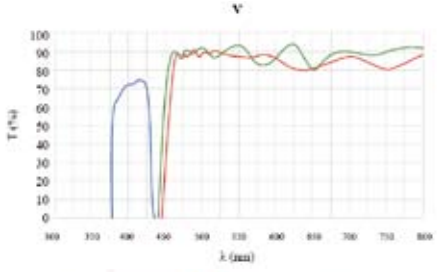


OPTIONAL FILTERS

Ultraviolet excitation



Violet excitation



FLUO Series - Accessories

Accessories for B-353LD1 / B-353LD2 / B-353FL

M-301	Eyepiece high-point WF10x/20mm
M-302	Eyepiece high-point WF16x/12mm
M-303	Eyepiece micrometer high-point WF10x/20mm
M-005	Micrometric slide, 26x76 mm, range 1 mm, div. 0,01 mm
M-330	Objective IOS planachromatic 4x/0.10
M-331	Objective IOS planachromatic 10x/0.25
M-332	Objective IOS planachromatic 20x/0.40
M-333	Objective IOS planachromatic 40x/0.65
M-335	Objective IOS planachromatic (no cover glass) 50x/0.70
M-334	Objective IOS planachromatic 100x/1.25 (oil)
M-350	Objective IOS planachromatic for phase contrast 10x/0.25
M-351	Objective IOS planachromatic for phase contrast 20x/0.40
M-352	Objective IOS planachromatic for phase contrast 40x/0.65
M-353	Objective IOS planachromatic for phase contrast 100x/1.25 (oil)
M-361	Complete phase contrast set with IOS E-PLAN obj. 10x, 20x, 40x, 100x
M-362	Polarising set (filters only)
M-363	Rotating table for polarizing set
M-364	Darkfield condenser for dry objectives
M-365	Photo tube adapter for SLR cameras full frame
M-366	CCD camera adapter
M-031	Dust cover type 3
M-974	Blue filter, 32 mm diameter
M-976	Green filter, 32 mm diameter
M-978	Yellow filter, 32 mm diameter
M-988	Frosted glass filter, 32 mm diameter
M-151	HBO100W high-pressure mercury bulb for fluoresc. (for B-353FL only)
M-173	APS-C reflex camera adapter

Accessories for B-600TiFL

M-680	Ergo binocular head 30°-60°
M-625	Eyepiece EWF10x/22mm
M-601	Eyepiece WF15x/16mm
M-602	Micrometer eyepiece EWF10x/22mm
M-005	26x76 mm micrometric slide. Range 1 mm, div. 0,01 mm
M-760	Objective IOS planachromatic for phase contrast 10x/0.25
M-761	Objective IOS planachromatic for phase contrast 20x/0.40
M-762	Objective IOS planachromatic for phase contrast 40x/0.65
M-763	Objective IOS planachromatic for phase contrast 100x/1.25 (oil)
M-681	Objective IOS FLUOR planachromatic 4x/0.13
M-682	Objective IOS FLUOR planachromatic 10x/0.30
M-683	Objective IOS FLUOR planachromatic 20x/0.50
M-684	Objective IOS FLUOR planachromatic 40x/0.75
M-685	Objective IOS FLUOR planachromatic 100x/1.30
M-613	Polarising set (filters only)
M-615	Lambda filter for polarizing set
M-614	Rotating table for polarizing set
M-618	Darkfield condenser for dry objectives
M-617	Complete phase contrast set with plan IOS obj. 10x, 20x, 40x, 100x
M-666	Heating stage, with digital temperature controller
M-619	Photo tube adapter for SLR cameras full frame
M-699	Photo tube adapter for DIGI digital camera series
M-620	CCD camera adapter for 1/3" sensors
M-620.1	CCD camera adapter for 1/2" sensors
M-622	Halogen bulb 12V/50W
M-151	HBO100W high-pressure mercury bulb for fluorescence
M-670	Empty fluorescence filterblock
M-671	Fluorescence filterset V (filterblock included)
M-672	Fluorescence filterset UV-DAPI (filterblock included)
M-034	Dust cover type 5
M-975	Blue filter, 45 mm diameter
M-977	Green filter, 45 mm diameter
M-979	Yellow filter, 45 mm diameter
M-989	Frosted glass filter, 45 mm diameter
M-690	Eyecup (pair)
M-173	APS-C reflex camera adapter

Accessories for XDS-2FL

M-755	Ergonomical trinocular head
M-755.1	Trinocular attachment for ergonomical binocular head for XDS-2
M-017	Eyepiece EWF10x/22mm
M-021	Eyepiece micrometer EWF10x/22mm
M-005	Micrometric slide, 26x76 mm, range 1 mm, div. 0,01 mm
M-770	Objective LWD IOS planachromatic 4x/0.10 (w. d. 18 mm)
M-771	Objective LWD IOS planachromatic 10x/0.25 (w. d. 10 mm)
M-772	Objective LWD IOS planachromatic 20x/0.40 (w. d. 5.1 mm)
M-773	Objective LWD IOS planachromatic 40x/0.60 (w. d. 2.6 mm)
M-774	Objective LWD IOS planachromatic for phase contrast 40x
M-776	Phase ring 40x
M-151	HBO100W high-pressure mercury bulb for fluorescence
M-777	Photo tube adapter for SLR cameras full frame
M-778	CCD camera adapter
M-779	Halogen bulb 6V/30W
M-036	Dust cover type 7
M-173	APS-C reflex camera adapter

Accessories for XDS-3FL/XDS-3FL4

M-780	Eyepiece EWF10x/22mm
M-781	Eyepiece micrometric EWF10x/22mm
M-005	Micrometric slide, 26x76 mm, range 1 mm, div. 0,01 mm
M-782	Objective LWD IOS planachromatic 4x/0.10 (working distance 22mm)
M-783	Objective LWD IOS planachromatic 10x/0.25 (w. d. 7.94mm)
M-784	Objective LWD IOS planachromatic 20x/0.40 (w. d. 7.66mm)
M-785	Objective LWD IOS planachromatic 40x/0.60 (w. d. 3.71mm)
M-783.1	Phase ring 10x/20x
M-785.1	Phase ring 40x
M-786	Objective LWD IOS planachromatic 60x/0.85 (working distance 2.50 mm)
M-801	Objective LWD IOS FLUO planachromatic 10x/0.25 (w. d. 10mm)
M-802	Objective LWD IOS FLUO planachromatic 20x/0.40 (w. d. 5.1mm)
M-803	Objective LWD IOS FLUO planachromatic 40x/0.60 (w. d. 2.6mm)
M-804	Objective LWD IOS FLUO planachromatic 60x
M-676	Empty fluorescence filterblock
M-677	Fluorescence filterset V (filterblock included)
M-678	Fluorescence filterset UV-DAPI (filterblock included)
M-151	HBO100W high-pressure mercury bulb for fluorescence
M-787	Cut-off filter (infrared)
M-788	Photo tube adapter for SLR cameras full frame
M-789	CCD camera adapter
M-790	Tube adapter for digital cameras DIGI series
M-621	Halogen bulb 6V/30W
M-036	Dust cover type 7
M-679	Empty filter block 4 positions (only for XDS-3FL)
M-677.1	Fluorescence filterset V for XDS-3FL4
M-678.1	Fluorescence filterset UV-DAPI for XDS-3FL4
M-173	APS-C reflex camera adapter

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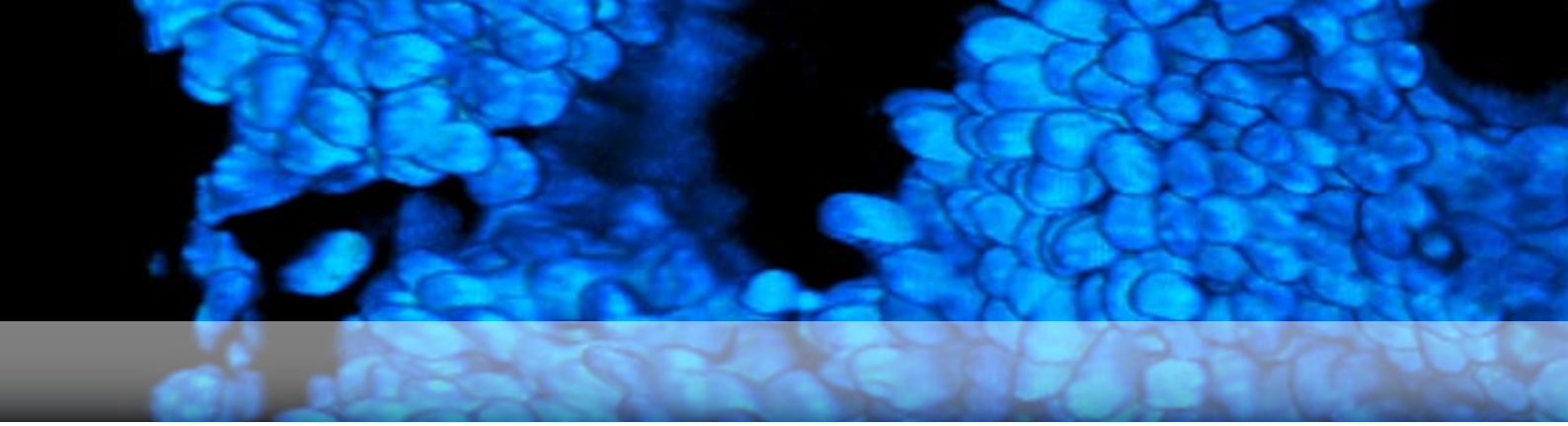
XDS Series

Inverted biological microscopes

XDS



XDS Series - XDS-1R

Easy to use

OPTIKA microscopes dedicates the model XDS-1R to routine microbiology applications, whenever ease of use is the main issue.

Cost-effectiveness

In being one of the most aggressively priced inverted microscopes on the market, XDS-1R offers a standard equipment that includes a full phase contrast set.

Classical, but young

A classical model in the OPTIKA inverted microscope range, XDS-1R has undergone small but significant improvements, that greatly enhance the usability.
An improved optical system extends the field of view to 20 mm.
A new illuminator, perpendicular to the specimen stage, implements a direct light path, with no "kinks" or bends, significantly simplifying alignment.

Versatility

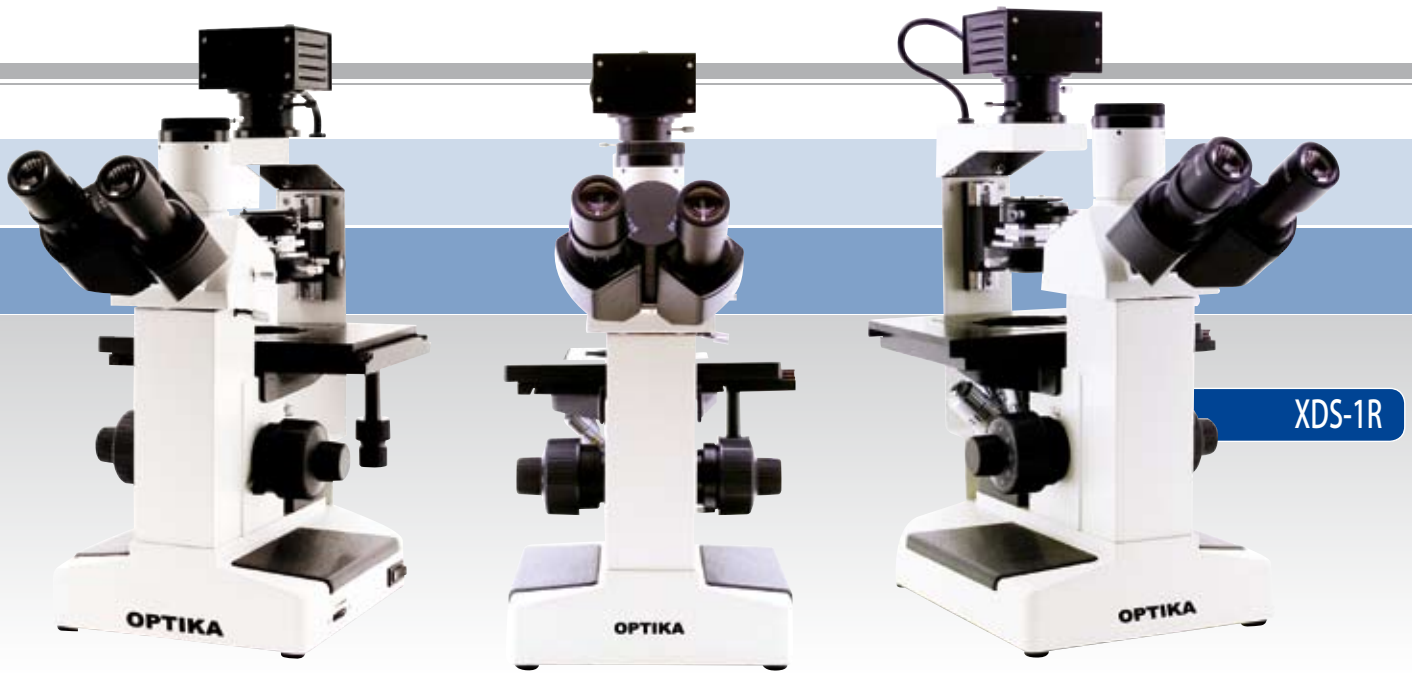
Trinocular head with photo/video port, translating specimen stage, various Petri dish and slide holders are included in the standard accessory equipment: multiple possibilities for a versatile approach to microbiology.

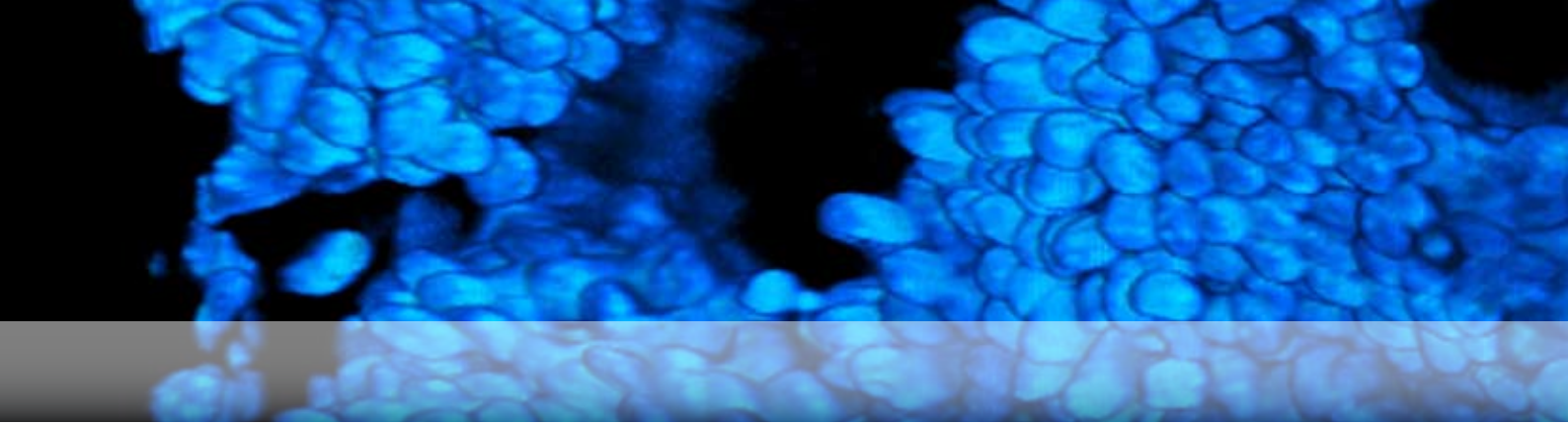
XDS-1R

XDS Series - Inverted biological microscope

XDS-1R - Technical specifications

Part	Description
Optical system	DIN standard: 160 mm tube length, 45 mm parfocality distance. Field number 20 mm.
Head	Trinocular: 30° inclined, 360° rotating. Interpupillary distance: 55 - 75 mm. Adjustable dioptric compensation.
Eyepieces	Wide field 10x/20mm, high-point.
Nosepiece	4 positions, with bidirectional rotation on ball bearings and click stop.
Objectives	Long working distance (LWD) planachromatic: 10x/0.25 (working distance 7.9 mm), phase contrast 10x/0.25 (working distance 7.9 mm), 25x/0.40 (working distance 5 mm), 40x/0.65 (working distance 3 mm).
Specimen stage	Size: 200 x 152 mm. Double layer translator with coaxial controls. X-Y translation: 77 x 37 mm. Interchangeable metallic inserts for specimen slides and various sizes of Petri dishes.
Focusing system	Macro- and micrometric regulation, with coaxial knobs on both sides of the stand. Adjustable tension and depth stop.
Condenser	Long working distance condenser, numerical aperture 0.40. Iris aperture diaphragm, filter and phase ring holder. Adjustable height, centrable.
Illumination system	6V / 20W halogen centrable illuminator, with adjustable intensity, condenser and field diaphragm.





XDS Series - XDS-2

A complete solution for your brightfield observation

All included, in the right place: this is the philosophy underlying this instrument.
XDS-2 is equipped with a full series of objectives, that covers most standard applications.
The translating stage is included in the standard equipment, and so is a set of 4 objectives (4x and 40x for brightfield; 10X and 20X for phase contrast) .

Ergonomy

Every control is easy to reach, every component has been designed with ease of use in mind.
The focusing and specimen translation controls are designed to allow to rest the wrists on the table.
The light intensity adjustemnt is placed very close to the focusing knobs.
The specimen stage is fitted with a special glass insert, that allows to see the objectives, for immediate identification of the magnification setup.
The head implements an extremely innovative design, that permits adjustment to compensate for operator height.

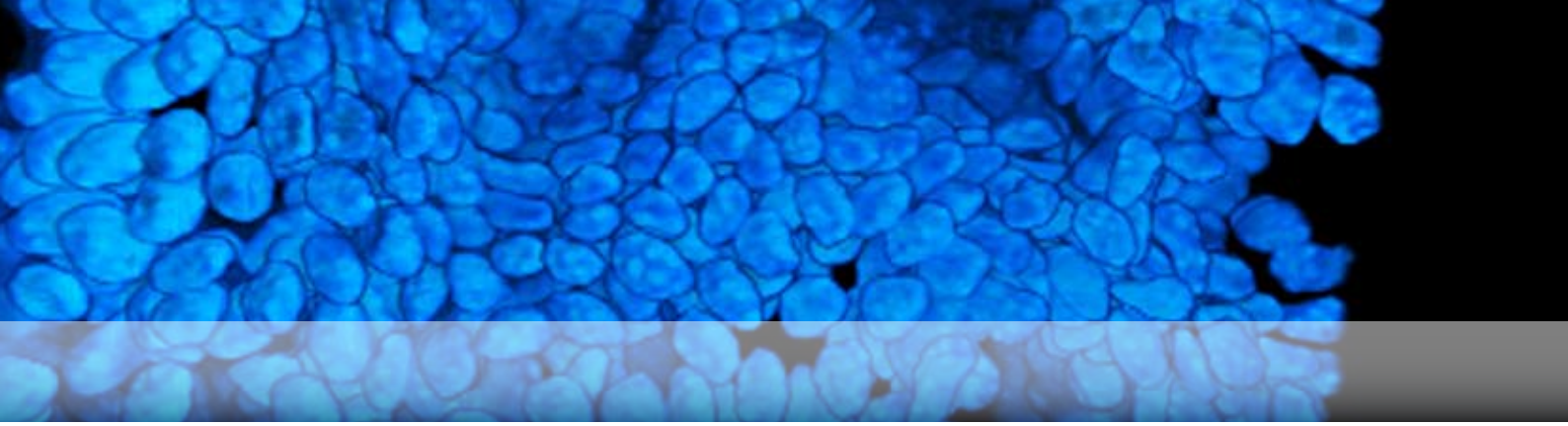
Efficiency

Plan-achromatic infinity corrected optics, bright 30W halogen illuminator, phase contrast set, holders for specimen slides, flasks, Petri dishes, trinocular head for photo/video applications. These are the features of XDS-2, a powerful, complete and innovative instrument, designed to set a reference standard for advanced routine microbiology.

User comfort

XDS-2 is comfortable for the operator. The 22 mm extra-wide field is pleasant to use, and minimizes operator stress. The special eyepieces are designed for eyeglass wearers.

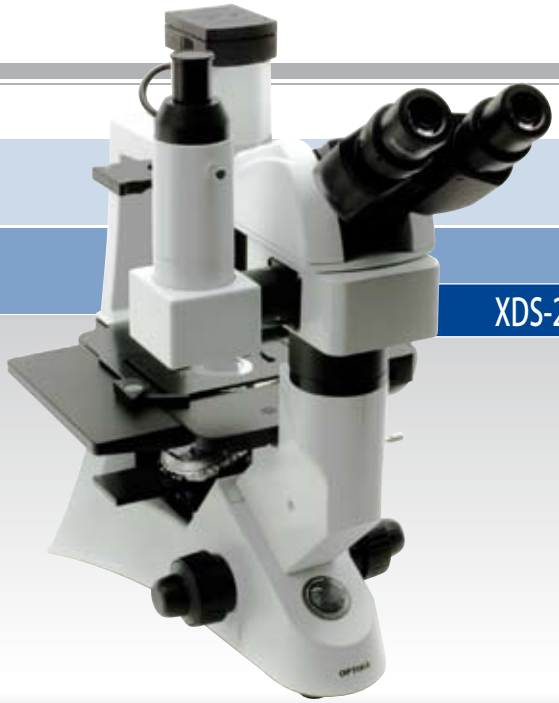
XDS-2



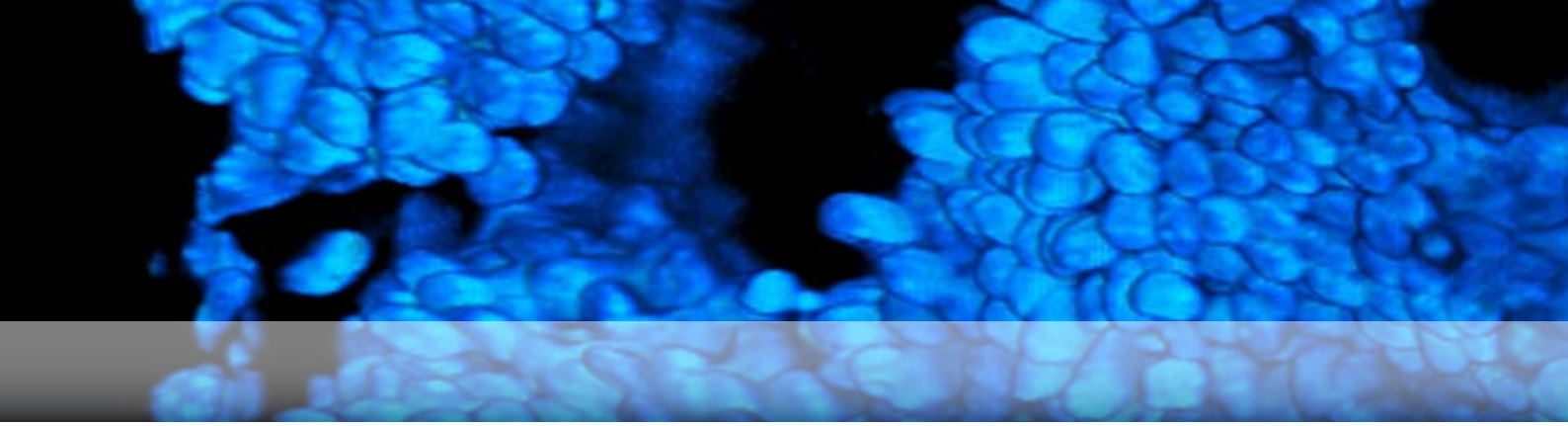
XDS Series - Inverted biological microscope

XDS-2 - Technical specifications

Component	Description
Optical system	Infinity corrected system, 45 mm parfocality distance. Field number 22 mm.
Heads	Trinocular: 30° inclined, 360° rotating. Interpupillary distance: 48 - 75 mm. Adjustable dioptric compensation. Ergonomic height compensation.
Eyepieces	Extra-wide field 10x/22mm, high-point.
Nosepiece	5 positions, with bidirectional rotation on ball bearings and click stop.
Objectives	Long working distance (LWD) infinity corrected (IOS) planachromatic: 4x/0.10 (working distance 18 mm), phase contrast 10x/0.25 (working distance 10 mm), phase contrast 20x/0.40 (working distance 5.1 mm), 40x/0.60 (working distance 2.6 mm), corrected for 1.2 mm coverglass.
Specimen stage	Size: 250 x 230 mm. Translator with lowered ergonomic coaxial controls. X-Y translation: 119 x 70 mm. Interchangeable metallic inserts for specimen slides, Petri dishes and flasks.
Focusing system	Macro and micrometric regulation, with coaxial knobs on both sides of the stand. Adjustable tension.
Condenser	Long working distance condenser, numerical aperture 0.30, working distance 72 mm. The condenser can be removed in order to increase the working distance to 150 mm.
Illumination system	**X-LED^{8TM} system**, with adjustable intensity, filter and phase ring holder and aperture diaphragm.



XDS-2ERGO



XDS Series - XDS-3

Top level solution for phase contrast observation

XDS-3 looks at the challenge of the future with confidence, offering first-class completeness, optical quality, mechanical versatility, that open the instrument to all the enhancements and accessories that will be developed throughout the years. OPTIKA has chosen XDS-3 as its inverted microscopy development platform for all illumination and manipulation accessories. Moreover, the open optical path allows the implementation of epi-fluorescence systems.

Completeness

The multiple access to the optical path ideally complements the infinity-corrected optics, and offers ample freedom for the development of special accessories.The bright 30W illuminator, coupled to a full phase ring set, to a photo port, and to the diverse holders for slides,
Petri dishes and flasks, qualify XDS-3 as a powerful and complete instrument, that finds its optimal application in high-end routine, and as a complement to the most powerful research microscopes.

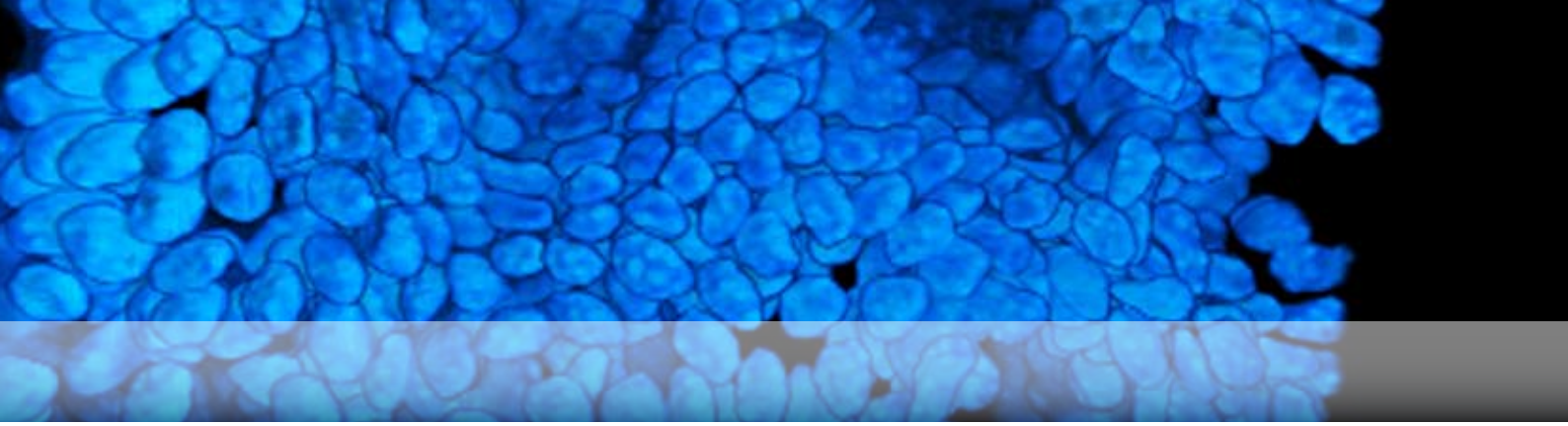
Efficiency

Effectiveness does not mean complexity. A particularly simple and ingenious optical design allows stable alignments and smooth and accurate movements throughout years of use.
Effectiveness does not mean cost. The optimally targeted design choices, both for mechanics and for optical components, have allowed OPTIKA to reach the performance of XDS-3 without sacrificing the accessibility that characterizes OPTIKA instruments. An additional reason to challenge the future.

Versatility

It still surprises us how, with few well-located controls, a microscope can become so versatile.
The controls are located in accessible and comfortable positions, and offer all degrees of freedom necessary for an immediate and pleasant use.
The glass stage surface allows an optimal visual access to the objective turret. The straight neck leaves ample room for sample positioning and for the most advanced probes.

X-LED 8 TM vs. Halogen

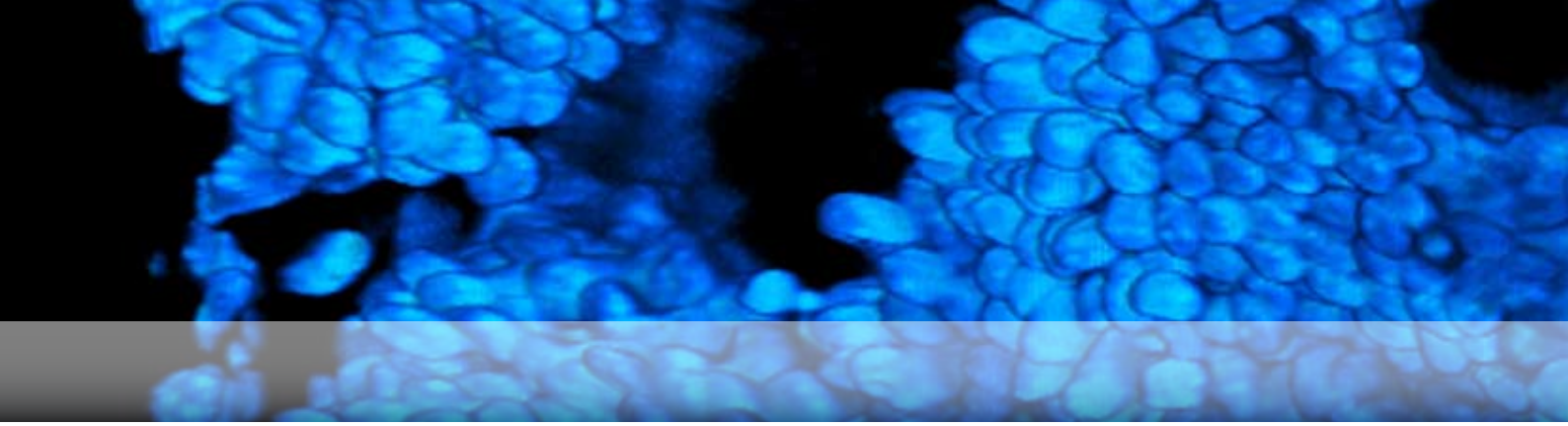


XDS Series - Inverted biological microscope

XDS-3 - Technical specifications

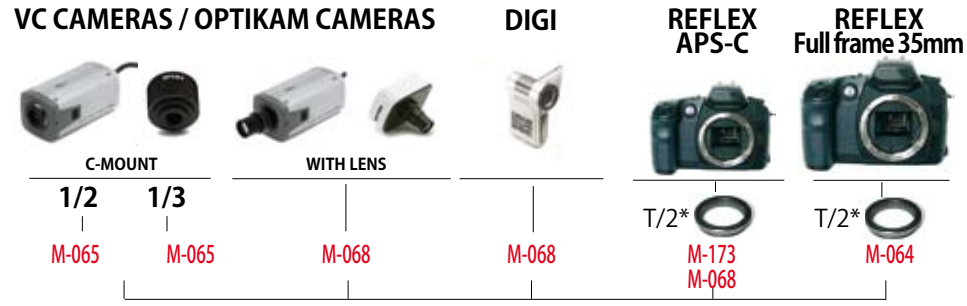
Part	Description
Optical system	Infinity corrected system, 45 mm parfocality distance. Field of view 22 mm.
Heads	Trinocular: 45° inclined. Interpupillary distance: 55 - 75 mm. Adjustable dioptric compensation.
Eyepieces	Extra-wide field 10x/22mm, high-point.
Nosepiece	5 positions, with bidirectional rotation on ball bearings and click stop.
Objectives	Long working distance (LWD) infinity corrected (IOS) planachromatic: phase contrast 10x/0.25 (working distance 7.94 mm), phase contrast 20x/0.40 (working distance 7.66 mm), phase contrast 40x/0.60 (working distance 3.71 mm), corrected for 1.2 mm coverglass.
Specimen stage	Size: 250 x 230 mm. Translator with lowered ergonomic coaxial controls. X-Y translation: 114 x 81 mm. Interchangeable metallic inserts for specimen slides, Petri dishes and flasks.
Focusing system	Macro- and micrometric regulation, with coaxial knobs on both sides of the stand. Adjustable tension..
Condenser	Long working distance condenser, numerical aperture 0.30, working distance 72 mm. The condenser can be removed in order to increase the working distance to 150 mm.
Illumination system	**X-LED^{8TM} system**, with adjustable intensity, filter and phase ring holder and aperture diaphragm.

Also available: “LT” version without hard case and moving stage



XDS Series - Photo - video applications

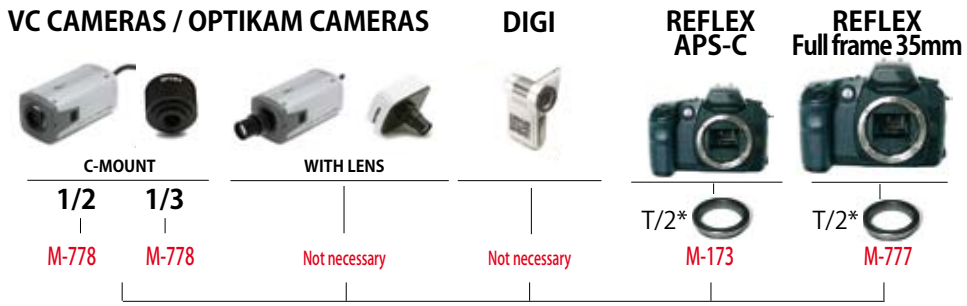
CAMERA ADAPTER CHART FOR TRINOCULAR MODELS



XDS-1R

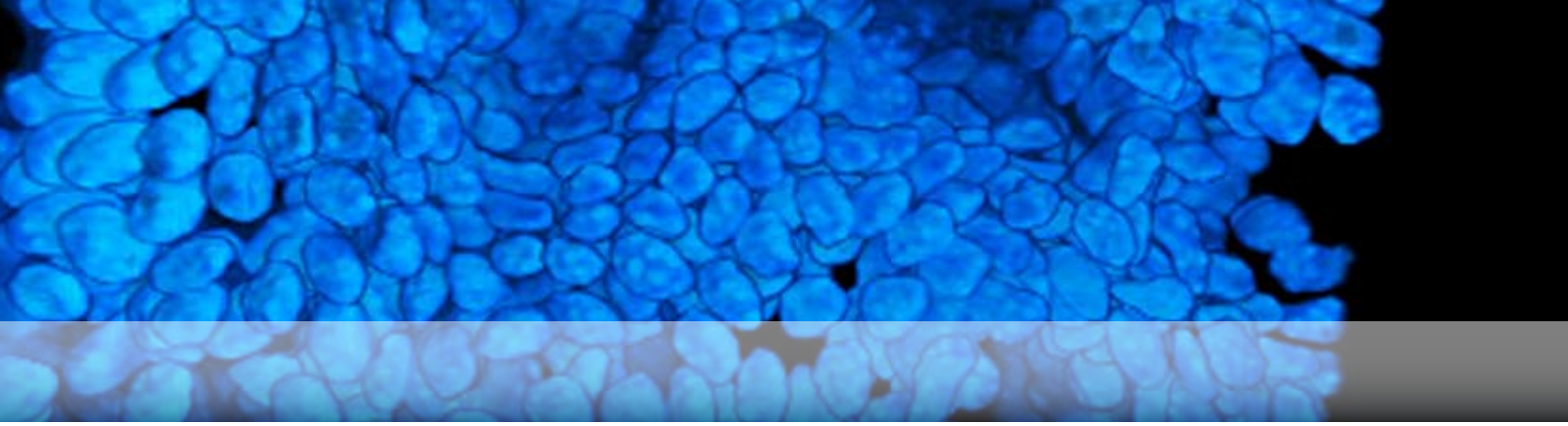
*T/2 is not supplied by OPTIKA

CAMERA ADAPTER CHART FOR TRINOCULAR MODELS



XDS-2

*T/2 is not supplied by OPTIKA



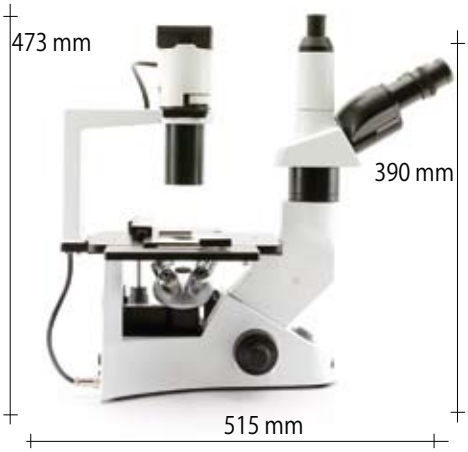
XDS Series - Photo - video applications

CAMERA ADAPTER CHART FOR TRINOCULAR MODELS

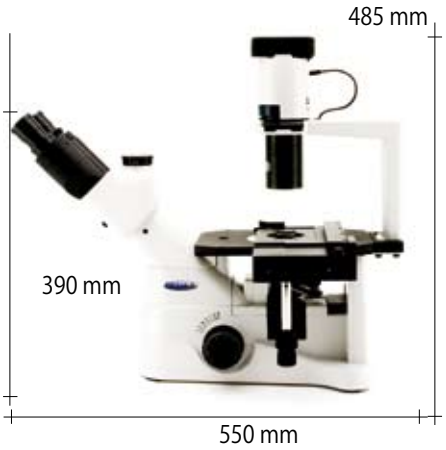
XDS-3

*T/2 is not supplied by OPTIKA

XDS-1R



XDS-2



XDS-3

XDS Series - Accessories

Accessories for XDS-1R

M-001	Eyepiece H5x
M-006	Eyepiece EWF10x/20mm
M-003	Eyepiece WF16x/12mm
M-078	Eyepiece micrometer EWF10x/20mm
M-005	Micrometric slide, 26x76 mm, range 1 mm, div. 0,01 mm
M-711	Objective LWD planachromatic 10x /0,25 (working distance 7.9 mm)
M-712	Objective LWD planachromatic 25x/0,40 (working distance 5 mm)
M-713	Objective LWD planachromatic 40x/0,65 (working distance 3 mm)
M-740	Objective LWD planachromatic for phase contrast 10x/0,25 (working distance 7.9 mm)
M-741	Objective LWD planachromatic for phase contrast 25x/0,40 (working distance 5 mm)
M-742	Objective LWD planachromatic for phase contrast 40x/0,65 (working distance 3 mm)
M-080	Phase contrast set (objective + phase ring) 25x
M-081	Phase contrast set (objective + phase ring) 40x
M-750	Phase ring 10x (spare)
M-751	Phase ring 25x (spare)
M-752	Phase ring 40x (spare)
M-064	Photo tube adapter for SLR cameras full frame
M-065	CCD camera adapter
M-068	Tube adapter for digital cameras DIGI series
M-014	Halogen bulb 6V/20W
M-035	Dust cover type 6
M-173	APS-C reflex camera adapter

Accessories for XDS-2

M-755	Ergonomical trinocular head
M-755.1	Trinocular attachment for ergonomical binocular head for XDS-2
M-017	Eyepiece EWF10x/22mm
M-021	Eyepiece micrometer EWF10x/22mm
M-005	Micrometric slide, 26x76 mm, range 1 mm, div. 0,01 mm
M-770	Objective LWD IOS planachromatic 4x/0.10 (working distance 18 mm)
M-771	Objective LWD IOS planachromatic for phase contrast 10x/0.25 (working distance 10 mm)
M-772	Objective LWD IOS planachromatic for phase contrast 20x/0.40 (working distance 5.1 mm)
M-773	Objective LWD IOS planachromatic 40x/0.60 (working distance 2.6 mm)
M-774	Objective LWD IOS planachromatic for phase contrast 40x
M-776	Phase ring 40x
M-777	Photo tube adapter for SLR cameras full frame
M-778	CCD camera adapter
M-779	Halogen bulb 6V/30W
M-036	Dust cover type 7
M-795	Fluorescence attachment HBO100W
M-173	APS-C reflex camera adapter

Accessories for XDS-3/XDS-3LT

M-780	Eyepiece EWF10x/22mm
M-781	Eyepiece micrometric EWF10x/22mm
M-005	Micrometric slide, 26x76 mm, range 1 mm, div. 0,01 mm
M-782	Objective LWD IOS planachromatic 4x/0.10 (working distance 22 mm)
M-783	Objective LWD IOS planachromatic for phase contrast 10x/0.25 (working distance 7.94 mm)
M-784	Objective LWD IOS planachromatic for phase contrast 20x/0.40 (working distance 7.66 mm)
M-785	Objective LWD IOS planachromatic for phase contrast 40x/0.60 (working distance 3.71 mm)
M-786	Objective LWD IOS planachromatic 60x/0.85 (working distance 2.50 mm)
M-787	Cut-off filter (infrared)
M-788	Photo tube adapter for SLR cameras full frame
M-789	CCD camera adapter
M-790	Tube adapter for digital cameras DIGI series
M-621	Halogen bulb 6V/30W
M-036	Dust cover type 7
M-792	Mechanical stage for XDS-3
M-173	APS-C reflex camera adapter

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INDUSTRIAL MICROSCOPES

INDUSTRIAL MICROSCOPES

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LAB Series

Professional entry-level stereomicroscopes

LAB

LAB Series

The LAB series can be considered as the entry-level of the OPTIKA professional stereomicroscopes range.
The two models have been designed for end users who need professional quality at low cost.

LAB-10	Binocular, selectable magnification
LAB-20	Binocular, zoom magnification

LAB-20

LAB-10

LAB Series

Heads
Binocular heads, 360° rotating and 45° inclined.

Interpupillary distance
Adjustable between 51 and 75 mm.

Eyepieces
WF10x/20 mm. Dioptric compensation adjustable on both eyepiece tubes.

Specimen stage
Fitted with a semi-transparent disc for transmitted light with specimen clips.

Objectives
LAB 10: with double magnification (2x-4x) that can be selected by rotating the lens unit. Working distance 80mm.

LAB 20: continuous zoom 0,7x ...4,5x. (6,43:1 zoom factor).
Working distance: 85 mm.

Stand
Fixed arm type with focusing mechanism.

Focusing
Rack and pinion controlled by a pair of knobs placed on both sides of the stand.

Illumination
Double adjustable illuminator for incident and transmitted light fitted with two high-efficiency LED light sources. The angle of the incident illuminator is adjustable. Voltage: 110/240V ac.

LAB Series - Technical specifications

Model	Head	Eyepieces	Objectives	Working Distance	Stand	Illumination
LAB-10	Binocular	WF 10x/20mm	2x - 4x selectable by rotating	80 mm	Pillar stand with fixed holder	Double incident and transmitted light. High-efficiency LED light sources with separate brightness controls
LAB-20	Binocular	WF 10x/20mm	0,7x....4,5x zoom	85 mm	Pillar stand with fixed holder	Double incident and transmitted light. High-efficiency LED light sources with separate brightness controls

LAB Series - Accessories

ST-001	Eyepieces (pair) WF5x/22mm
ST-401	Eyepieces (pair) WF10x/20mm
ST-402	Eyepieces (pair) WF15x/15mm
ST-403	Eyepieces (pair) WF20x/10mm
ST-405	Eyepiece micrometric WF10x/20mm
ST-410	Additional lens 0,5x for LAB 20 (w.d. 170 mm)
ST-411	Additional lens 1,5x for LAB 20 (w.d. 42 mm)
ST-415	Eye cups (pair) type 1
ST-029	Dust cover type 12

LAB-10

LAB-20

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SZM Series

Professional stereozoom microscopes

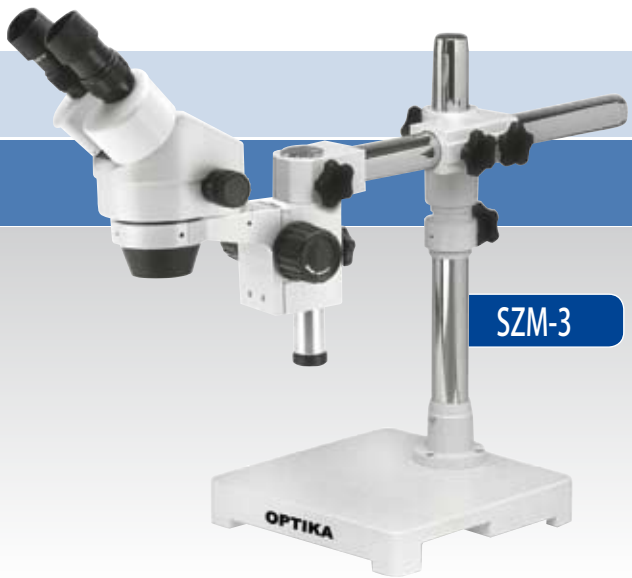
SZM

SZM Series

The stereomicroscopes of the SZM series are instruments designed for laboratory and industry applications.

Their optical and mechanical qualities place them at the top of their category and the price/quality ratio is excellent. The stereomicroscopes share the same optical system consisting of binocular and trinocular heads with zoom objectives.
The four models of the SZM series find their proper application wherever professional instruments are required. Several accessories provide an ample choice of configurations and applications.

SZM-1	Binocular with pillar stand, halogen lamp
SZM-1Led	Binocular with pillar stand, LED
SZM-2	Trinocular with pillar stand, halogen lamp
SZM-2Led	Trinocular with pillar stand, LED
SZM-3	Binocular with overhanging stand
SZM-4	Trinocular with overhanging stand



SZM Series

Heads
Binocular and trinocular, 360° rotating and 45° inclined.

Interpupillary distance
Adjustable between 51 and 75 mm.

Dioptric compensation
On both eyepiece tubes.

Eyepieces
EWF10x/20 mm

Objectives
Parfocal achromatic zoom 0,7x...4,5x (6,428:1 zoom factor).

Specimen stage:
Models with illumination are fitted with a black/white disc.
Specimen clips and a frosted disc for transmitted light.

Focusing
Rack and pinion mechanism controlled by a pair of knobs placed on both sides of the stand.

Stand
Pillar stand: 30 mm and 25 cm high. Base: 26x20x6h cm. Overhanging stand: 42 cm high, 23x23 cm base and 45 cm horizontal arm lenght.

Illumination
Double, adjustable incident and transmitted light, fitted with two 12V/15W halogen bulbs. The angle of the incident illumination is adjustable. The two models SZM-1/2Led are equipped with a double high-power LED.

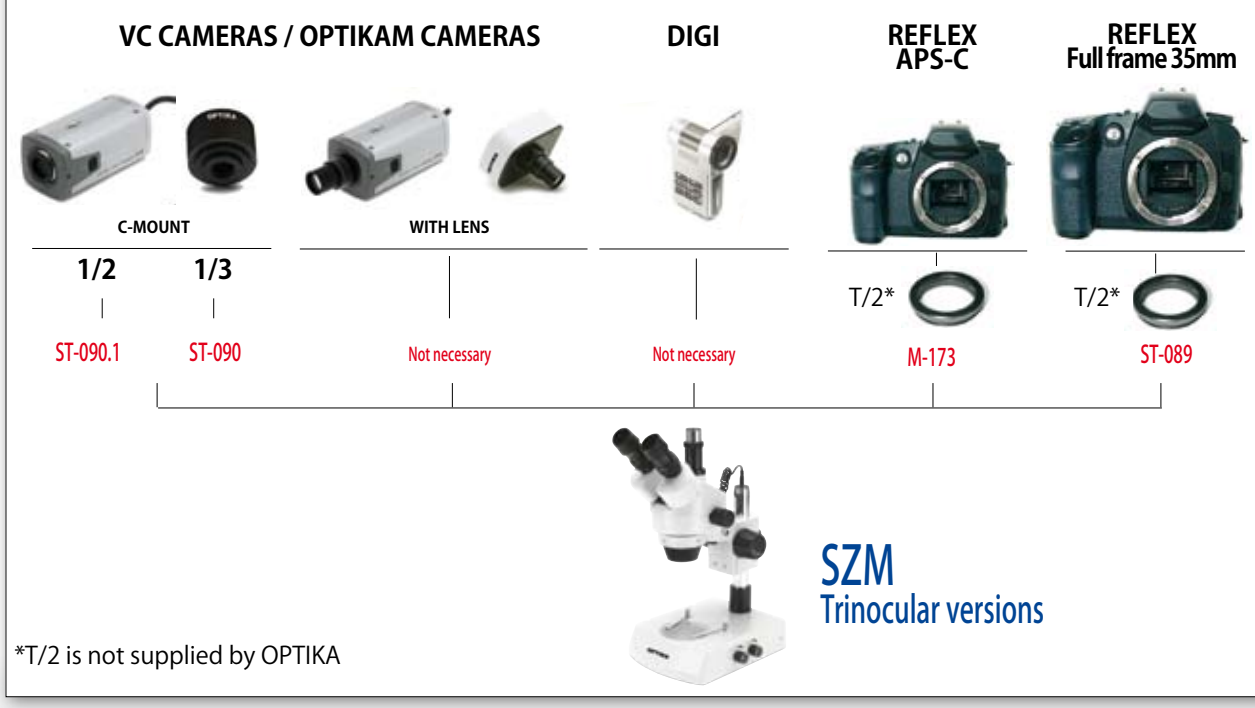
SZM Series - Technical specifications

Model	Head	Eyepieces	Objectives	Working Distance	Stand	Illumination
SZM-1	Binocular	EWF 10x/20mm	0,7 .... 4,5x Zoom	100 mm	Pillar stand	Incident and transmitted 12V/15W halogen
SZM-1Led	Binocular	EWF 10x/20mm	0,7 .... 4,5x Zoom	100 mm	Pillar stand	**Incident: high power single LED Transmitted: LED diffusing disc**
SZM-2	Trinocular	EWF 10x/20mm	0,7 .... 4,5x Zoom	100 mm	Pillar stand	Incident and transmitted 12V/15W halogen
SZM-2Led	Trinocular	EWF 10x/20mm	0,7 .... 4,5x Zoom	100 mm	Pillar stand	**Incident: high power single LED Transmitted: LED diffusing disc**
SZM-3	Binocular	EWF 10x/20mm	0,7 .... 4,5x Zoom	100 mm	Overhanging stand	---
SZM-4	Trinocular	EWF 10x/20mm	0,7 .... 4,5x Zoom	100 mm	Overhanging stand	---

SZM Series - Accessories

ST-081	Eyepieces (pair) WF10x/20 mm
ST-082	Eyepieces (pair) WF15x/15 mm
ST-083	Eyepieces (pair) WF20x/10 mm
ST-084	Eyepiece micrometric WF10x/20 mm
ST-085	Additional lens 0,5x (w.d. 165 mm)
ST-091	Additional lens 0,75x (w.d. 117 mm)
ST-086	Additional lens 1,5x (w.d. 47 mm)
ST-087	Additional lens 2x (w.d. 26 mm)
ST-088	Polarising set (filters and rotating stage)
ST-040	Darkfield condenser
ST-041	Sample clip
ST-100	Moving stage
ST-089	Reflex camera adapter for full frame sensor
ST-090	CCD camera adapter (for 1/3" sensors)
ST-090.1	CCD camera adapter (for 1/2" sensors)
ST-036	Eye cups (pair) type 2
ST-012	White/black object-plate, type 2 dia. 95 mm
ST-014	Glass stage, type 2, dia. 95 mm
ST-038	Halogen bulb, 12V/15W
ST-037	Halogen bulb, 12V/15W, with dichroic mirror
ST-033	Dust cover type 13
ST-666	Heating stage, with digital temperature controller
ST-173	APS-C Reflex camera adapter

CAMERA ADAPTER CHART FOR TRINOCULAR MODELS



SZM
Trinocular versions

*T/2 is not supplied by OPTIKA

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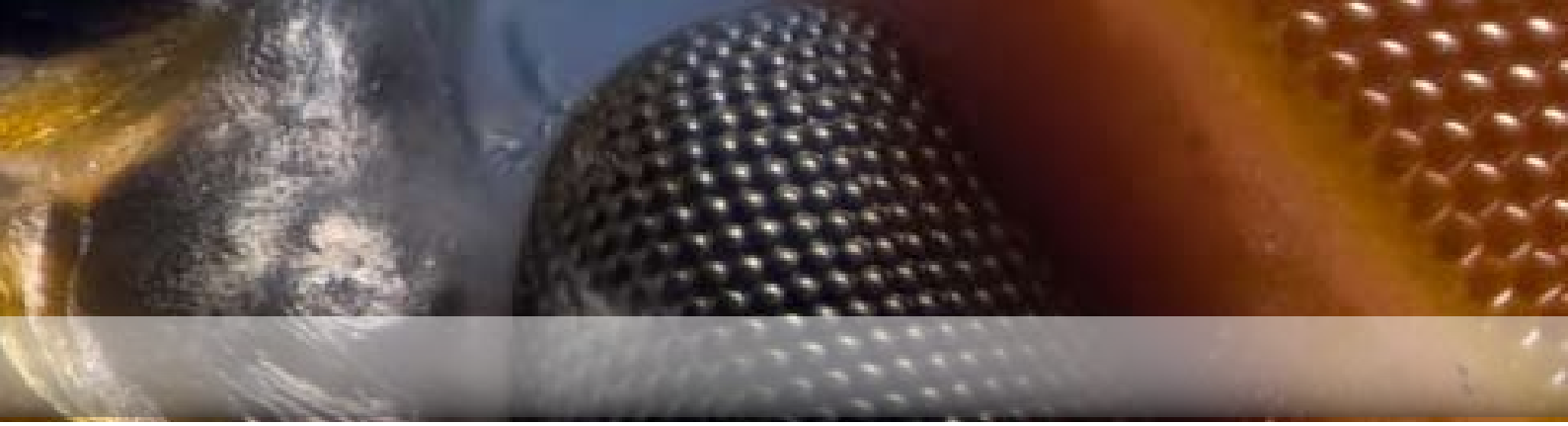
SZR Series

Laboratory stereozoom microscopes

SZR

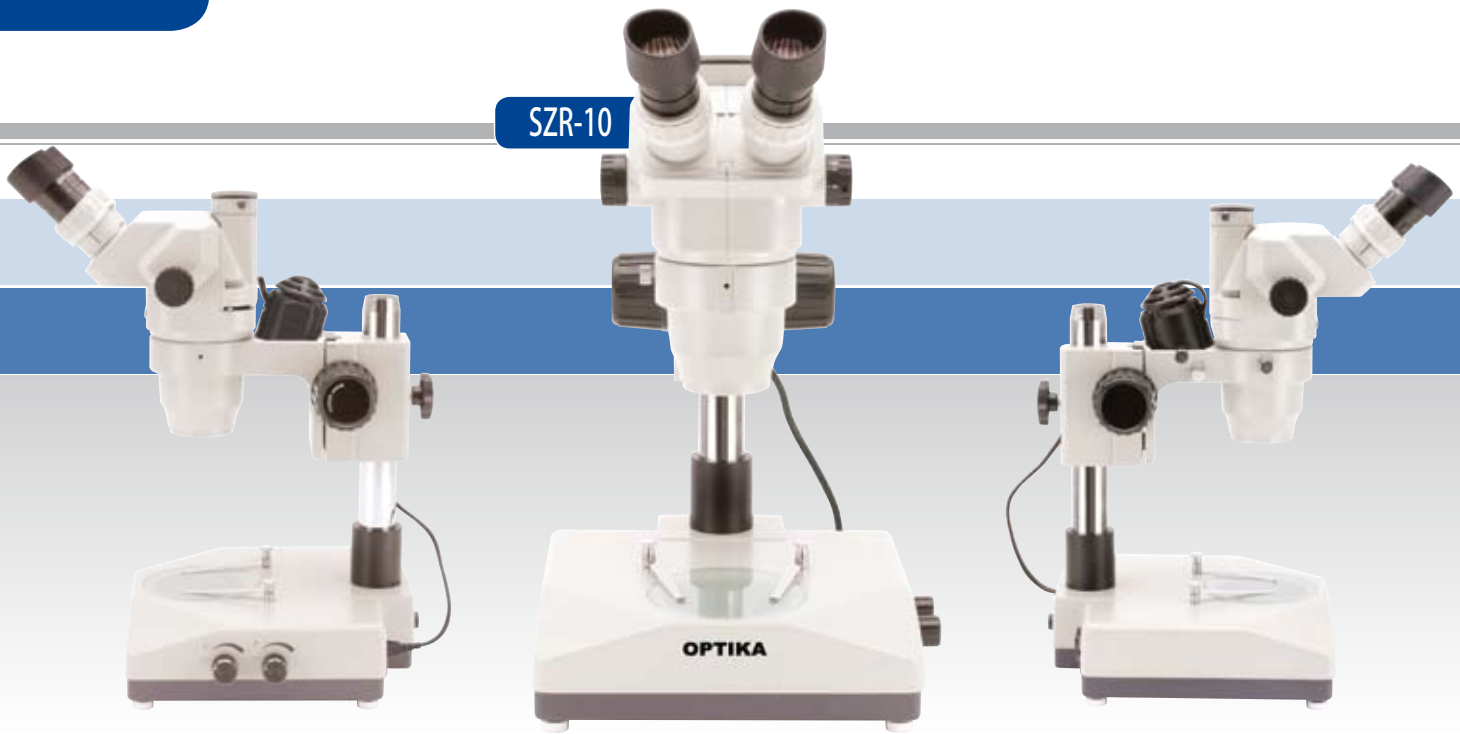


SZR Series

The SZR stereomicroscope series is specifically designed for research workers. Its functional features and its optical and mechanical qualities make it a reference point in the scientific research instruments market. It is composed by 14 models designed with different technical solutions to meet the specific applications. The binocular and trinocular heads provided with zoom optics represent the heart of the SZR series. These are backed by numerous types of bases and stands suitable for any type of use. A wide range of accessories considerably increases the potential of these instruments.

SZR-1	Binocular, simple stand
SZR-2	Trinocular, simple stand
SZR-3	Binocular, simple stand with incident illumination
SZR-4	Trinocular, simple stand with incident illumination
SZR-5	Binocular, stand with incident or trasmitted illumination
SZR-6	Trinocular, stand with incident or trasmitted illumination
SZR-7	Binocular, stand with incident and trasmitted illumination
SZR-8	Trinocular, stand with incident and trasmitted illumination
SZR-9	Binocular, pillar stand with incident and trasmitted illumination
SZR-10	Trinocular, pillar stand with incident and trasmitted illumination
SZR-11	Binocular with simple overhanging stand
SZR-12	Trinocular with simple overhanging stand
SZR-13	Binocular with hinged overhanging stand
SZR-14	Trinocular with hinged overhanging stand

SZR-10



SZR Series

Heads
Binocular or trinocular, 360º rotating and 45º inclined.

Interpupillary distance
Adjustable between 52 and 75 mm.

Dioptric compensation
On both eyepiece tubes.

Eyepieces
EWF10x/22mm, high-point.

Working distance
110 mm.

Objectives
Parfocal achromatic zoom 0,67x...4,5x with continuously variable magnification (max. 45x in the standard configuration, can be increased to 180x by using additional accessories).

Specimen stage:
Except overhanging models, the instruments are fitted with a black/white disc for contrast and specimen clamps.
Models with transmitted illumination also fitted with frosted glass disc.

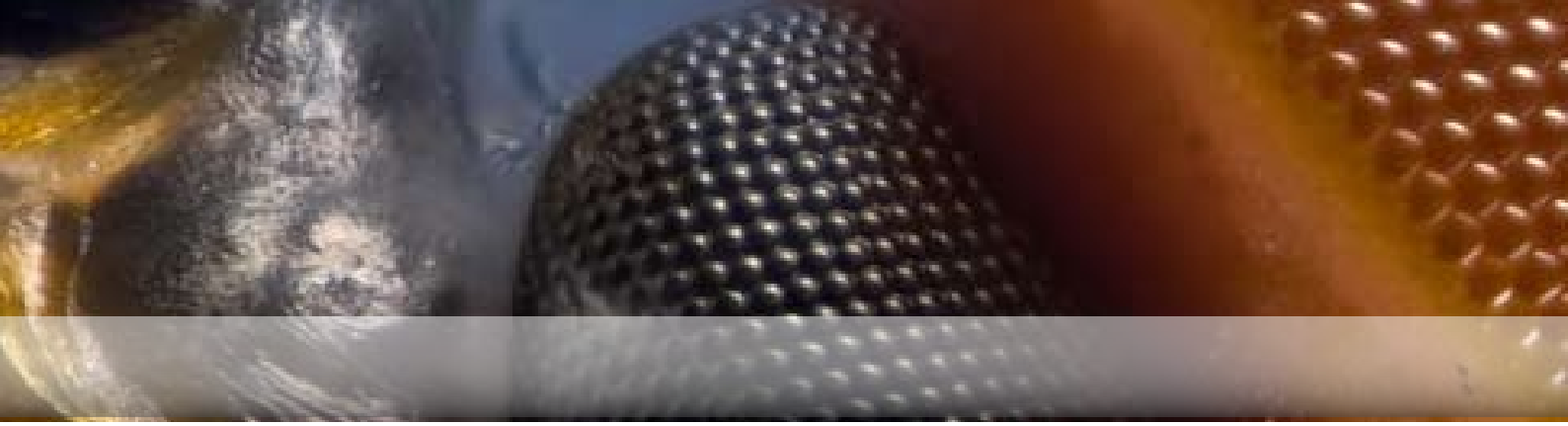
Focusing
By means of rack and pinion system, controlled by a pair of knobs.

Illumination
12V/15W halogen bulbs with light intensity adjustments. SZR-9 and SZR-10 models are the only ones with built-in illumination system. All others models with illumination have a system based on external power supply unit.

Stands
The series have 5 kinds of stands for every requirement.
Simple for vision without transmitted illumination; simple + trans-illuminator base for incident and transmitted illumination; with incorporated illumination system in the base; the last ones with overhanging stands (simple or hinged), that allow very large objects to be viewed and to be handled or worked.

Photo/video applications

For microphotography with SLR 35mm type or digital type cameras, a model fitted with a trinocular head and the following optional accessories are required for taking pictures:
- SLR 35mm cameras: SZ-PH (photo tube, adapter for T/2 ring and 4x photo eyepiece). Purchase of the T/2 ring suitable to the type of SLR camera used is also indispensable.
- DIGI digital camera set: SZ-PHD tube adapter. The optical adapter is included in DIGI set. For video microscopy, a model fitted with a trinocular head and the following optional accessories are required for shooting with a CCD video camera: SZ-CTV CCD camera adapter and VC03 high-resolution CCD colour video camera. VC03 is supplied complete with built-in transformer, monitor connection cable, SCART adapter for TV connection and instruction manual.



SZR Series - Models

SZR-2

Trinocular
Simple stand with rack and pinion system

SZR-6

Trinocular
Stand with rack and pinion system
Incid. or transm., halogen 12V/15W, external power supply

SZR-10

Trinocular
Pillar stand
Incid. or transm., halogen 12V/15W, external power supply

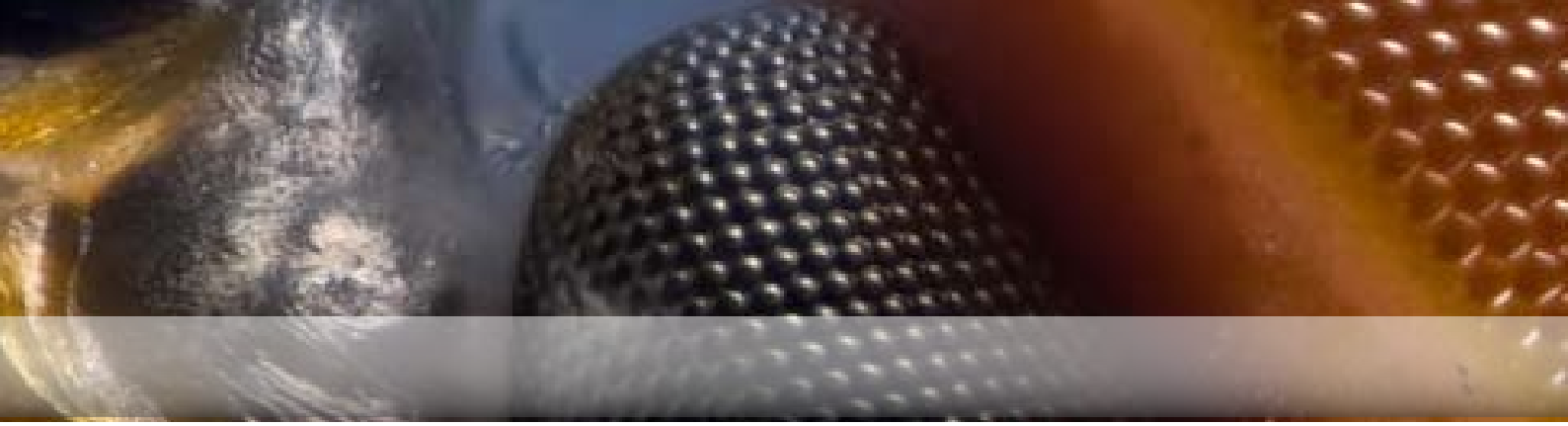
SZR Series - Models

SZR-12

Trinocular
Simple overhanging

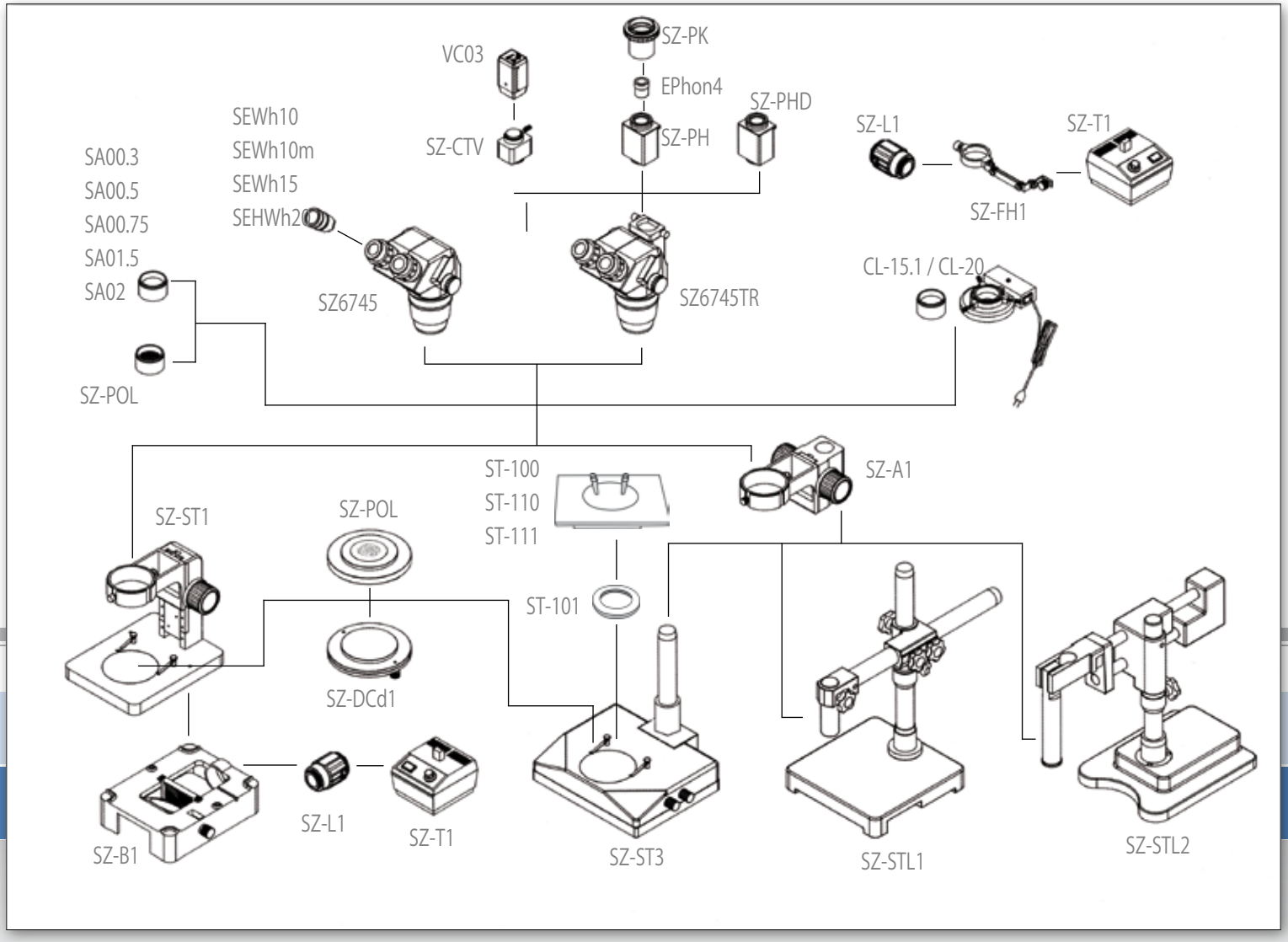
SZR-14

Trinocular
Hinged overhanging



SZR Series- Optional accessories and spare components

A wide range of optional accessories is available in order to extend the possibilities offered by the SZR series instruments: additional optics, accessories for all photography/video applications, including the possibility of using DIGI digital camera set, darkfield & polarizing light.



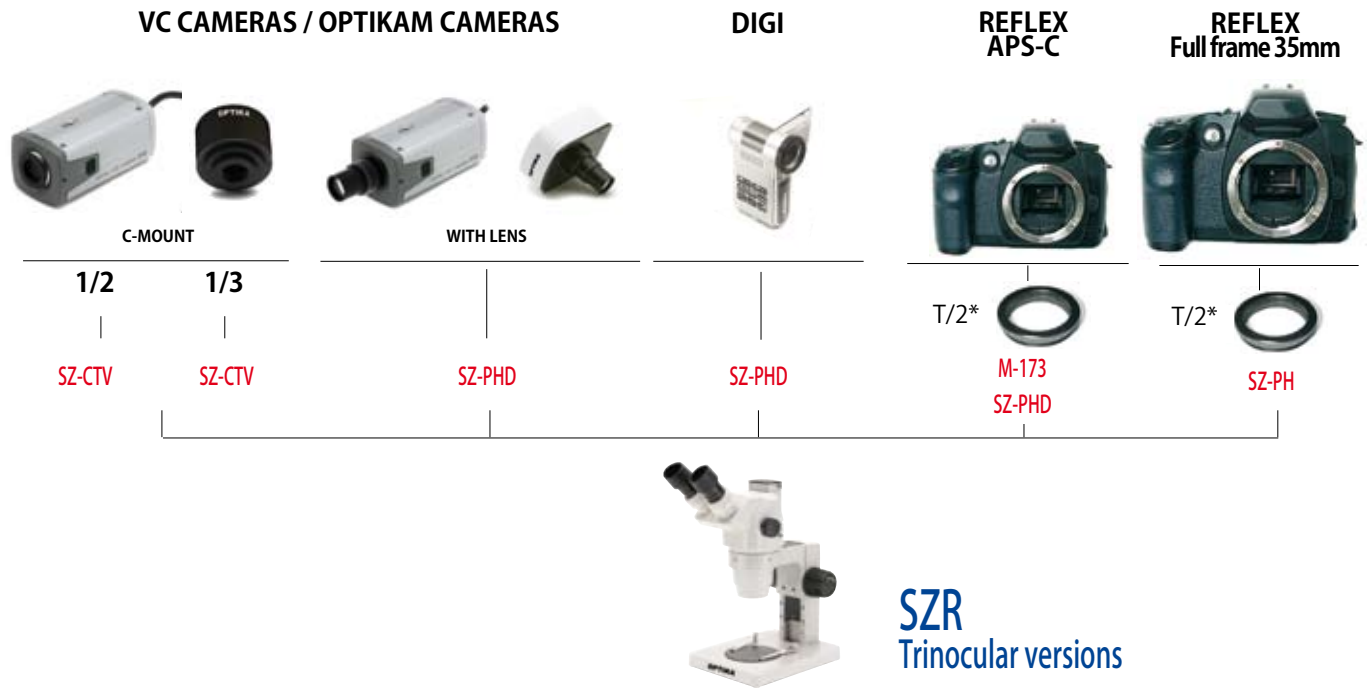
SZR Series - Technical specifications

Model	Head	Eyepieces	Objective	Working distance	Stand	Illumination
SZR-1	Binocular	EWF10x/22	0,67....4,5x	110mm	Simple stand with rack and pinion system	----------
SZR-2	Trinocular	EWF10x/22	0,67....4,5x	110mm	Simple stand with rack and pinion system	----------
SZR-3	Binocular	EWF10x/22	0,67....4,5x	110mm	Simple stand with rack and pinion system	Incident halogen 12V/15W, external power supply
SZR-4	Trinocular	EWF10x/22	0,67....4,5x	110mm	Simple stand with rack and pinion system	Incident halogen 12V/15W, external power supply
SZR-5	Binocular	EWF10x/22	0,67....4,5x	110mm	Stand with rack and pinion system	Incid. or transm., halogen 12V/15W, external power supply
SZR-6	Trinocular	EWF10x/22	0,67....4,5x	110mm	Stand with rack and pinion system	Incid. or transm., halogen 12V/15W, external power supply
SZR-7	Binocular	EWF10x/22	0,67....4,5x	110mm	Stand with rack and pinion system	Incid. and transm., halogen 12V/15W, external power supply
SZR-8	Trinocular	EWF10x/22	0,67....4,5x	110mm	Stand with rack and pinion system	Incid. and transm., halogen 12V/15W, external power supply
SZR-9	Binocular	EWF10x/22	0,67....4,5x	110mm	Pillar stand	Incid. and transm., halogen 12V/15W, internal power supply
SZR-10	Trinocular	EWF10x/22	0,67....4,5x	110mm	Pillar stand	Incid. and transm., halogen 12V/15W, internal power supply
SZR-11	Binocular	EWF10x/22	0,67....4,5x	110mm	Simple overhanging	----------
SZR-12	Trinocular	EWF10x/22	0,67....4,5x	110mm	Simple overhanging	----------
SZR-13	Binocular	EWF10x/22	0,67....4,5x	110mm	Hinged overhanging	----------
SZR-14	Trinocular	EWF10x/22	0,67....4,5x	110mm	Hinged overhanging	----------

SZR Series - Accessories

SZ6745	Zoom binocular head, with eyepieces
SZ6745TR	Zoom trinocular head, with eyepieces
SZ-ST1	Simple base
SZ-B1	Slide projection base
SZ-ST3	Pillar stand
SZ-STL1	Simple overhanging stand, without head holder
SZ-STL2	Hinged overhanging stand, without head holder
SZ-A1	Focusing system
SZ-DCd1	Darkfield condenser
SZ-POL	Polarising set (filters and rotating stage)
SZ-L1	Halogen bulb 12V/15W
SZ-FH1	Arm for illuminator SZ-L1
SZ-T1	Transformer for SZ-L1
SZ-PH	Reflex camera adapter
SZ-PHD	Adapter for digital cameras DIGI series
SZ-CTV	CCD camera adapter
SEWh15	Eyepieces (pair) WF15x/16mm
SEHWh20	Eyepieces (pair) WF20x/12mm
SEWh10m	Eyepiece micrometric WF10x/22mm
SAO0.3	Additional lens 0,3x (w.d. 287mm)
SAO0.5	Additional lens 0,5x (w.d. 185mm)
SAO0.75	Additional lens 0,7x (w.d. 120mm)
SAO1.5	Additional lens 1,5x (w.d. 49mm)
SAO2	Additional lens 2x (w.d. 28mm)
ST-100	Hand moving stage
ST-101	Ring adapter for mounting ST-100 on SZR series
ST-036	Eye cups (pair) type 2
ST-042	White/black object-plate, type 3, dia. 100 mm
ST-043	Glass stage, type 3, dia. 100 mm
ST-038	Halogen bulb, 12V/15W
ST-037	Halogen bulb, 12V/15W, with dichroic mirror
ST-039	Dust cover type 14
ST-666	Heating stage, with digital temperature controller
M-173	APS-C Reflex camera adapter

CAMERA ADAPTER CHART FOR TRINOCULAR MODELS



SZR
Trinocular versions

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MODULAR Series

Modular stereozoom microscopes for industry

MODULAR

MODULAR Series - Heads

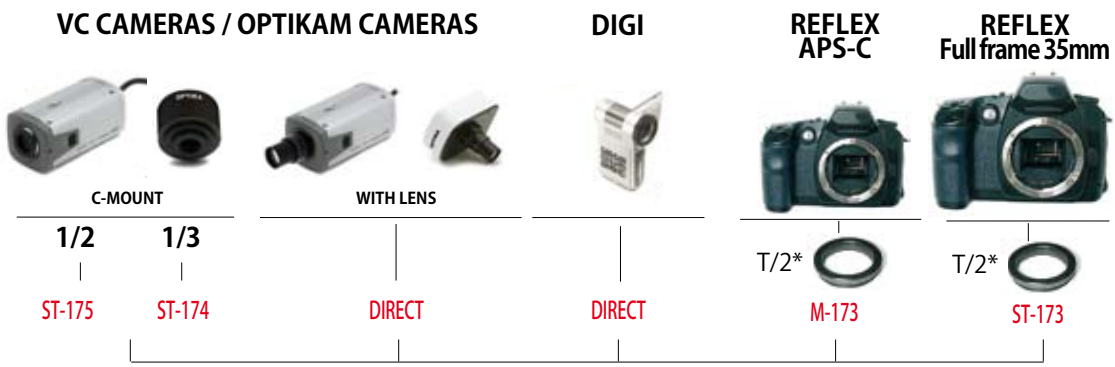
The MODULAR series has been designed to match professional needs in industrial field.

With a wide range of stereozoom heads and special stands, it allows to build your own model on the basis of your needs.

LAB-2BH Binocular stereozoom head

45° inclined, 360° rotatable;
WF10x/20mm widefield eyepieces;
Interpupillary distance: 51-75 mm;
Dioptric adjustment: +/-5 dp;
1x....4x zoom objective;
Zoom ratio: 4:1;
Working distance: 85 mm.

CAMERA ADAPTER CHART FOR TRINOCULAR MODELS



- Add ST-170 or ST-171 for SZP heads

Trinocular stereo heads

*T/2 is not supplied by OPTIKA

MODULAR Series - Heads

LAB-3TH Trinocular stereozoom head

45° inclined, 360° rotatable;
WF10x/20mm widefield eyepieces;
Interpupillary distance: 51-75 mm;
Dioptric adjustment: +/-5 dp;
1x....4x zoom objective;
Zoom ratio: 4:1;
Working distance: 85 mm.

LAB-3TH

MODULAR Series - Accessories

Eyepieces

ST-001	Eyepieces (pair) WF5x/22mm
ST-002	Eyepieces (pair) WF10x/20mm
ST-003	Eyepieces (pair) WF15x/15mm
ST-004	Eyepieces (pair) WF20x/13mm
ST-005	Eyepiece micrometric WF10x

Additional lenses

ST-023	Additional lens 0,5x for LAB-2BH and LAB-3TH (w.d. 170 mm)
ST-024	Additional lens 1,5x for LAB-2BH and LAB-3TH (w.d. 42 mm)

Photo & Video adapters

ST-089	SLR Reflex camera adapter
ST-090	CCD camera adapter (for 1/3" sensors)
ST-090.1	CCD camera adapter (for 1/2" sensors)
M-173	APS-C Reflex camera adapter

MODULAR Series - Heads

SZM-B

SZM-B Binocular stereozoom head

45° inclined, 360° rotatable;
WF10x/20mm high-point widefield eyepieces;
Interpupillary distance: 51-75 mm;
Dioptric adjustment: +/-5 dp;
0,7x....4,5x zoom objective;
Zoom ratio: 6,43:1;
Working distance: 100 mm.

SZM-T

SZM-T Trinocular stereozoom head

45° inclined, 360° rotatable;
WF10x/20mm high-point widefield eyepieces;
Interpupillary distance: 51-75 mm;
Dioptric adjustment: +/-5 dp;
0,7x....4,5x zoom objective;
Zoom ratio: 6,43:1;
Working distance: 100 mm.

MODULAR Series - Accessories

Eyepieces

ST-081	Eyepieces (pair) WF10x/20 mm
ST-082	Eyepieces (pair) WF15x/15 mm
ST-083	Eyepieces (pair) WF20x/10 mm
ST-084	Eyepiece micrometric WF10x/20 mm

Additional lenses

ST-085	Additional lens 0,5x (w.d. 165 mm)
ST-091	Additional lens 0,75x (w.d. 117 mm)
ST-086	Additional lens 1,5x (w.d. 47 mm)
ST-087	Additional lens 2x (w.d. 26 mm)

Photo & Video adapters

ST-089	SLR Reflex camera adapter
ST-090	CCD camera adapter (for 1/3" sensors)
ST-090.1	CCD camera adapter (for 1/2" sensors)
ST-173	APS-C Reflex camera adapter

MODULAR Series - Heads

SZN-B Binocular stereozoom head

45° inclined, 360° rotatable;
WF10x/22mm high-point widefield eyepieces;
Interpupillary distance: 55-75 mm;
Dioptric adjustment: +/-5 dp:
0,67x....4,5x zoom objective;
Zoom ratio: 6,72;
Working distance: 110 mm.

SZN-T Trinocular stereozoom head

45° inclined, 360° rotatable;
WF10x/22mm high-point widefield eyepieces;
Interpupillary distance: 55-75 mm;
Dioptric adjustment: +/-5 dp:;
0,67x....4,5x zoom objective;
Zoom ratio: 6,72;
Working distance: 110 mm.

MODULAR Series - Accessories

Eyepieces

ST-141	Eyepieces (pair) WF10x/22mm
ST-142	Eyepieces (pair) WF15x/16mm
ST-143	Eyepieces (pair) WF20x/12mm
ST-144	Eyepieces (pair) WF25x/9mm
ST-145	Eyepiece micrometric WF10x/22mm

Additional lenses

SAO0.3	Additional lens 0,3x (w.d. 287 mm)
SAO0.5	Additional lens 0,5x (w.d. 185mm)
SAO0.75	Additional lens 0,7x (w.d. 120mm)
SAO1.5	Additional lens 1,5x (w.d. 49mm)
SSAO2	Additional lens 2x (w.d. 28mm)

Photo & Video adapters

ST-146	SLR Reflex camera adapter for full frame sensor
ST-147	CCD camera adapter (for 1/3" sensors)
ST-147.1	CCD camera adapter (for 1/2" sensors)
ST-173	APS-C Reflex camera adapter

MODULAR Series - Heads

SZP-6 Binocular parallel stereozoom head

30° inclined, 360° rotatable;
WF10x/22mm high-point widefield eyepieces;
Interpupillary distance: 52-75 mm;
Dioptric adjustment: +/-5 dp;
Objective: 1x;
0,8x....5x zoom objective;
Zoom ratio: 6:1;
Working distance: 80 mm.

SZP-6

ST-170

ST-172

SZP-8 Binocular parallel stereozoom head

30° inclined, 360° rotatable;
WF10x/22mm high-point widefield eyepieces;
Interpupillary distance: 52-75 mm;
Dioptric adjustment: +/-5 dp;
Objective: 1x;
0,8x....6,4x zoom objective;
Zoom ratio: 8:1;
Working distance: 80 mm.

SZP-10 + ST-171

SZP-10 Binocular parallel stereozoom head

30° inclined, 360° rotatable;
WF10x/22mm high-point widefield eyepieces;
Interpupillary distance: 52-75 mm;
Dioptric adjustment: +/-5 dp;
Objective: 1x;
0,8x....8x zoom objective;
Zoom ratio: 10:1;
Working distance: 80 mm.

SZP-ERGO HEAD

All models have a ergocomic head version

MODULAR Series - Accessories

Eyepieces

ST-161	Eyepieces (pair) WF15x/15 mm
ST-162	Eyepieces (pair) WF20x/12 mm
ST-163	Eyepiece micrometric WF10x/22 mm

Objectives

ST-165	Objective 0,3x (w.d. 280 mm)
ST-166	Objective 0,5x (w.d. 165 mm)
ST-167	Objective 2x (w.d. 32,5 mm)

Photo & Video attachments and adapters

ST-170	Photo/Video beam splitter - 1 port
ST-171	Photo/Video beam splitter - 2 ports
ST-172	Iris diaphgram
ST-173	Asp-c Reflex camera adapter
ST-174	CCD camera adapter (for 1/3" sensors)
ST-175	CCD camera adapter (for 1/2" sensors)

MODULAR Series - Stands

ST-150

ST-150 Large plain stand with head holder and focusing mechanism. Pillar type. Base: 320x280mm. Pillar: Ø32x360mm.

ST-151

ST-151 Large plain stand with head holder and focusing mechanism. LED trans-illuminator with intensity control. Pillar type. Base: 320x280mm. Pillar: Ø32x360mm.

ST-152

ST-152 Large plain stand with head holder and focusing mechanism. Fixed arm type. Base: 320x280mm. Fixed arm: 360mm.

ST-153

ST-153 Large plain stand with head holder and focusing mechanism. LED trans-illuminator with intensity control. Fixed arm type. Base: 320x280mm. Fixed arm: 360mm.

SZ-STL1H

SZ-STL1H Simple overhanging stand with head holder. Base dimensions: 230x230mm. Pillar: Ø32x380mm. Horizontal arm: 430mm.
*** Head not included**

SZ-STL2H

SZ-STL2H Hinged overhanging stand with head holder. Base dimensions: 260x210mm. Pillar: Ø32x380mm. Horizontal arm: 550mm.
*** Head not included**

MODULAR Series - Stands

SZ-STL8

SZ-STL8 Modern stand with small base. With 2 incident X-LED illuminators on flexible arms, and high brightness LED disc trans -illuminator (100mm Ø).

ST-155

ST-155 Modern stand with large base.
LED trans-illuminator and LED incident illuminator, both with intensity control. ***Head not included.**

ST-156 Modern stand with large base. LED trans-illuminator and LED incident illuminator, both with intensity control. Coaxial coarse and fine focusing system. ***Head not included.**

SZ-STL4

SZ-STL3Led

SZ-STL3Led Industrial stand, with table clamp and double X-LED illuminators on flexible arms.
***Head not included.**

SZ-STL3

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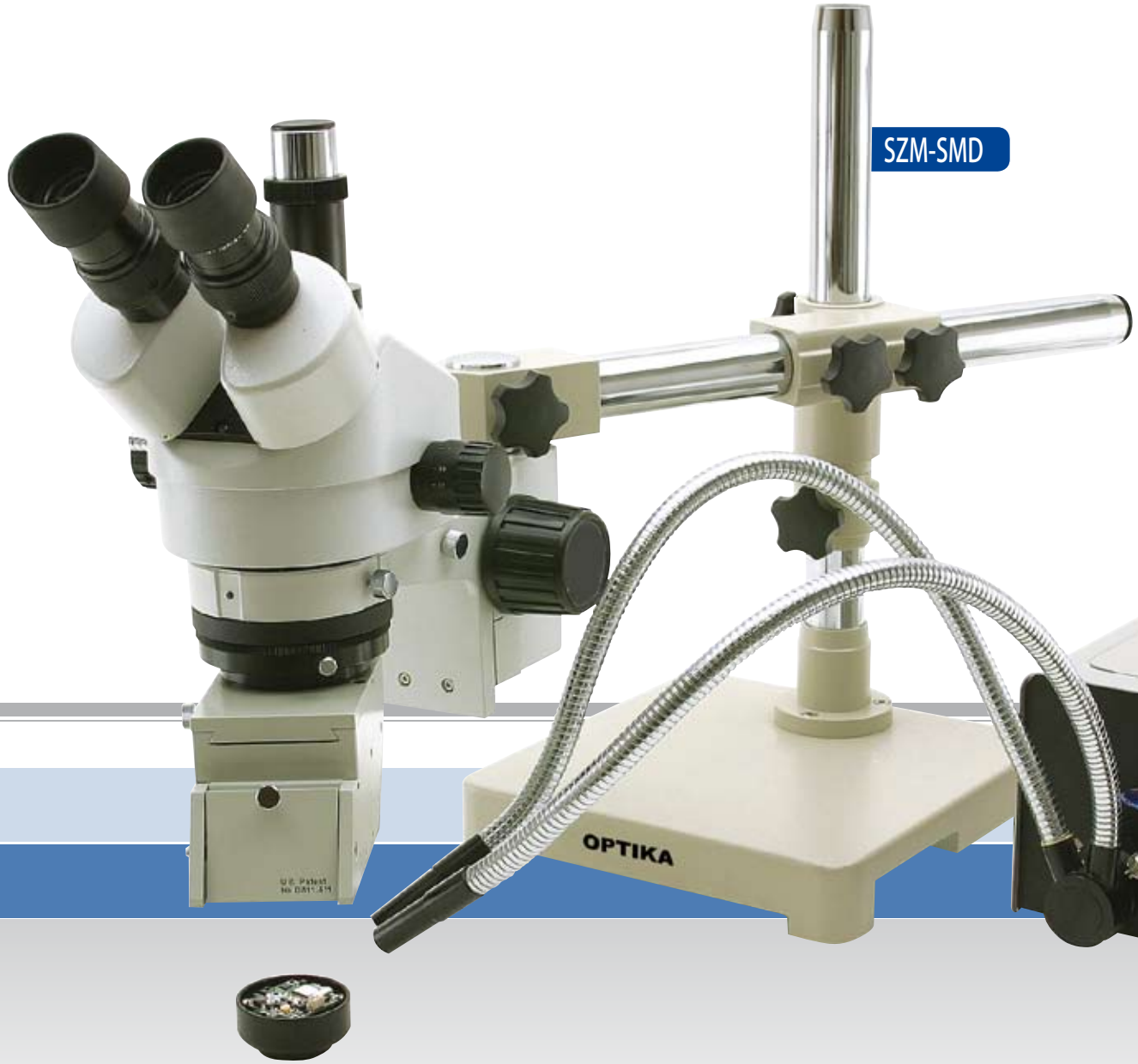
SZM-SMD Series

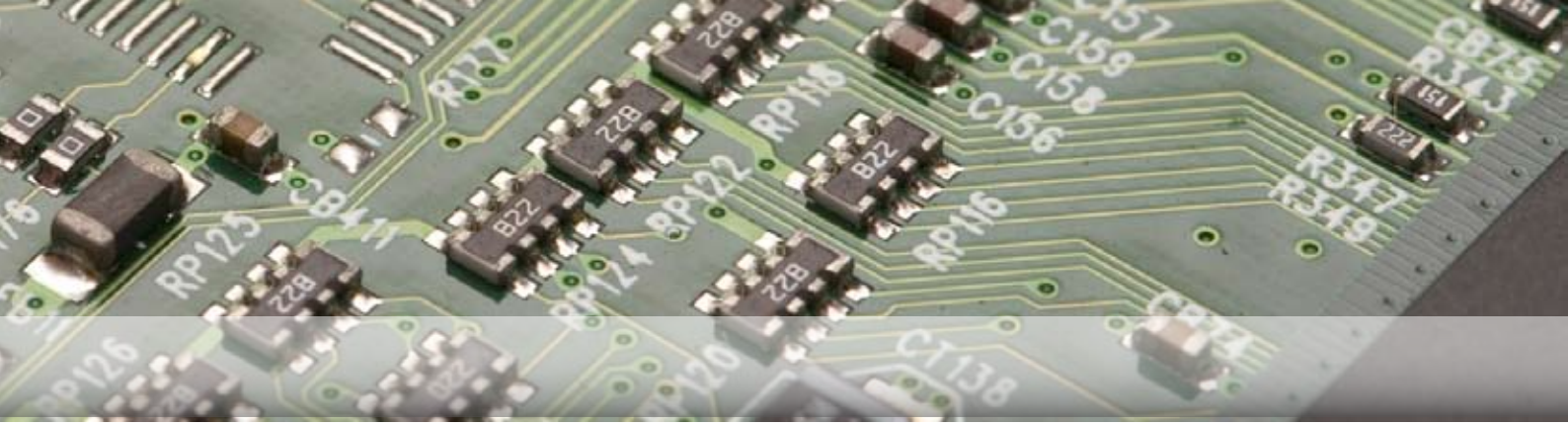
Stereozoom microscope for SMD inspection

SZM-SMD

SZM-SMD Series

The SZM-SMD has been designed specifically for the inspection of solder connections, rework and repair of electronic circuits and for mounting small electronic components.
One-touch sliding movement allows the user to quickly change from vertical to oblique viewing.





SZM-SMD Series - Technical specifications

Heads

Trinocular, 45°inclined, 360° rotating. Microscope for SMD inspection.

Eyepieces

WF10X/20mm, high-point.

Objectives

Zoom 0,7x...4,5x.

Magnification

7x...45x

Illumination

Optional.

SMD attachment:

Rotatable 360°. vertical working distance 103mm.
Oblique working distance 103mm.
With inclination adjusting mechanism.

SZM-SMD Series - Accessories

Eyepieces

ST-081	Eyepieces (pair) WF10x/20 mm
ST-082	Eyepieces (pair) WF15x/15 mm
ST-083	Eyepieces (pair) WF20x/10 mm
ST-084	Eyepiece micrometric WF10x/20 mm

Photo & Video adapters

ST-089	SLR Reflex camera adapter for Full Frame
ST-090	CCD camera adapter (for 1/3" sensors)
ST-090.1	CCD camera adapter (for 1/2" sensors)
M-173	APS-C Reflex camera adapter

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ACCESSORIES

Illumination and sample positioning

ACCESSORIES

ACCESSORIES

CL-30

2-arm LED illuminator

Light sources: LED (x2);
With 2W high efficiency LEDs.
Chromaticity coordinates (x,y): 0.320, 0.320;
Luminous flux: 80 lm each arm;
Emission angle: 35°;
Power supply: 12Vdc, 1500 mA;
Without brightness control.

CL-31

2-arm LED illuminator

Light sources: LED (x2);
With 2W high efficiency LEDs.
Chromaticity coordinates (x,y): 0.320, 0.320;
Luminous flux: 80 lm each arm;
Emission angle: 35°;
Power supply: 12Vdc, 1500 mA;
With brightness control.

CL-41

Light sources: LED (x2);
With 3,5W high efficiency X-LED.
Chromaticity coordinates (x,y): 0.320, 0.320);
Luminous flux: 400 lm each arm;
Emission angle: 25°;
Power supply: 12Vdc, 1500 mA;
With brightness control.

ACCESSORIES

CL-01 **Cold light generator**

100W cold light generator, extra-high efficiency 12V halogen dichroic lamp. Brightness adjustment on remote control panel.

CL-11 **Double-arm optic fiber guide**

Lenght 500 mm, diameter 13 mm. Fitted with two fixed condensers (lenses) at the ends of the arms.

CL-12 **Ring optic fiber guide**

Lenght 700 mm, diameter 16 mm. The circular end is suitable for all series , by using the three locking screws.
Diameter of the fixing ring: 55mm.

CL-15.1 **LED ring light illuminator**

Led ring light illuminator. Suitable for all series. Intensity light control. Diameter of the fixing ring 60mm.

CL-20 **Ring light illuminator**

Fluorescence ring light illuminator, 8W. Suitable for all series. Diameter of the fixing ring: 60mm.

ACCESSORIES

ST-100 Moving stage

Manual positioning stage.
Dimensions: 185x145mm.
Range: 56mm (X) x 35mm (Y)

ST-110 Moving stage, with knobs

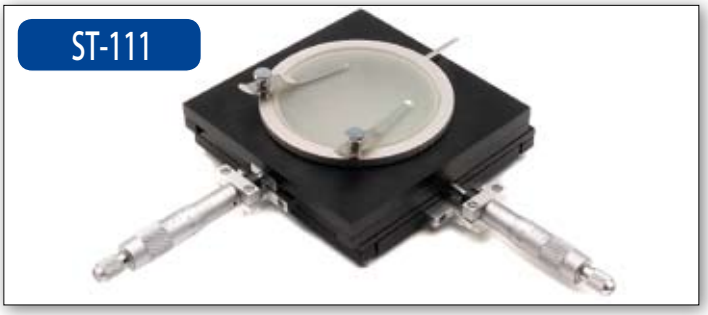
Manual positioning stage, using knobs for X-Y movements.
Dimensions: 180x155mm.
Range: 75mm (X) x 54mm (Y).

ST-111 Moving stage, with micrometer screws

Manual positioning stage, using micrometer screws.
Dimensions: 185x145mm.
Range: 25mm (X) x 25mm (Y).
Micrometer screws resolution: 0.01mm

M-666 Heating stage

Temperature range: 20°C (room temperature) – 50°C
Temperature setting resolution: 1°C
Temperature measuring resolution: 0.1°C
Display: LED display for set temperature
LED display for measured temperature
Power supply: Input: 110/220Vac 50/60Hz. Power: 50W



ST-666 Heating stage for stereomicroscopes

Temperature range: 20°C (room temperature) – 50°C
Temperature setting resolution: 1°C
Temperature measuring resolution: 0.1°C
Display: LED display for set temperature
LED display for measured temperature
Power supply: Input: 110/220Vac 50/60Hz. Power: 50W

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OPTIGEM Series

Gemological stereomicroscopes

OPTIGEM

OPTIGEM Series

SZM-GEM-1	Gemological stereozoom, binocular head
SZM-GEM-2	Gemological stereozoom, trinocular head
OPTIGEM-3	Gemological stereozoom, binocular head
OPTIGEM-4	Gemological stereozoom, trinocular head
OPTIGEM-1	Gemological stereozoom, binocular head
OPTIGEM-2	Gemological stereozoom, trinocular head

SZM-GEM -1/2 models

These two models are typical gem microscopes with fixed stand.

A special ultrabright LED-based electronic condenser, with intensity control, and perfectly colour-matched to sunlight, allows to switch from bright to dark field.

The condenser uses a new optical configuration for a perfect dark field usability range.

OPTIGEM Series - Technical specifications

Heads

SZM-GEM-1: Binocular rotating 360° and 45° inclined.
SZM-GEM-2: Trinocular rotating 360° and 45° inclined.
Diopter adjustment on both eyepieces.
Interpupillary adjustment 51-75 mm.

Eyepieces

Widefield eyepieces WF10x/20mm with field number 20.

Objectives

Parfocal achromatic objective 1x. Working distance: 100 mm.
Zoom range: 0,7x - 4,5x. Zoom factor: 6,428:1.

Specimen stage:

Specimen clamps. Adjustable gemology clip.

Focusing

By means of a rack and pinion controlled by a pair of knobs placed on both sides of the stereomicroscope.

Microscope stand

Pillar stand height 25 cm. Base: 26x20x6h cm. Weight: 6 Kg.

Illumination

Incident illumination: dichroic halogen lamp (12V/15W) with angle and brightness adjustment.
Transmitted illumination: pure white (6300K) LED system for observation in brightfield (with diffusive LED disc) and darkfield (with side-emitting LED ring).
Through a selector it's possible to choose between 3 modes: brightfield only, darkfield only, or both brightfield and darkfield.
Provided with a lever for the insertion of a black background in order to improve the darkfield observation.
Voltage: 110/240Vac, 50/60Hz, 1A ; Fuses: T1A 250V
Max. required power: 30W

SZM-GEM-2

OPTIGEM Series

OPTIGEM - 3/4 models

These models are classic gemological microscopes with tilting stand.

The darkfield condenser uses a typical optical configuration, based on an halogen illumination system and a classic reflecting system.

A flexible arm with a fluorescent tube simulates north facing daylight for accurate color grading.

OPTIGEM Series - Technical specifications

Heads

OPTIGEM-3: Binocular rotating 360° and 45° inclined.
OPTIGEM-4: Trinocular rotating 360° and 45° inclined.
Diopter adjustment on both eyepieces.
Interpupillary adjustment 55-75 mm.

Eyepieces

Widefield eyepieces WF10x/22 with field number 22.

Objectives

Parfocal achromatic objective 1x. Working distance: 110 mm.
Zoom range: 0,67x - 4,5x. Zoom factor: 6,71:1.

Specimen stage:

Adjustable gemology clip. Base 360° rotating.

Focusing

By means of a rack and pinion controlled by a pair of knobs placed on both sides of the stereomicroscope.

Microscope stand

Rack-and-pinion stand (it can be inclined 45°).
Base: 305x260x70h mm.
Weight: 7 Kg.

Illumination

Incident illumination: flexible arm with fluorescent tube 7W 6400K (pure white). Independent ON/OFF switch.
Transmitted illumination: system for observation with brightfield and dark-field, based on 30W halogen illumination and a dedicated reflecting system. Brightness adjustment.
Iris diaphragm and removable black background for contrast enhancement with darkfield.
Input: 240Vac, 50Hz;
Max. required power: 45W.

OPTIGEM Series

OPTIGEM -1/2 models

The OPTIGEM-1 and OPTIGEM-2 are revolutionary 2-in-1 gemology instruments that can be used both as a vertical and as a horizontal microscopes, at the turn of a knob and without disassembling any part.

A special ultrabright LED-based electronic condenser, with intensity control, and perfectly colour-matched to sunlight, allows to switch from bright to dark field.

The condenser uses a new optical configuration for a perfect dark field usability range. An additional flexible arm and velvet-field slider allow for extra contrast, for crisp and vibrant images even in a brightly lit environment. A modular optional accessories, that include: gemology clip, an iris aperture diaphragm,a polarization analysis kit, an optical unit to switch the dark field from a "sharp" (gem exhibition) to a "soft" (diamond analysis) mode translating cell holder with vacuum pick-up and quartz immesion cells complete and enhance the instrument usability. All the accessories can be stacked, in any order, both when the microscope is being used as a horizontal unit and when it is in its vertical configuration. The microscope body can be rotated through a full 360°, yet keeping the base sturdly fixed on the table, to show gems to a customer, or to share opinions with a colleague.

Heads

OPTIGEM-1: Binocular rotating 360° and 45° inclined.
OPTIGEM-2: Trinocular rotating 360° and 45° inclined.
Diopter adjustment on both eyepieces.
Interpupillary adjustment 51-75 mm.

Eyepieces

Widefield eyepieces WF10x/22 with field number 22.

Objectives

Parfocal achromatic objective 1x. Working distance: 110 mm.
Zoom range: 0,7x - 4,5x. Zoom factor: 6,428:1.

Specimen stage:

Adjustable gemology clip. Base 360° rotating. Pair of rods for assembling optional accessories.

Focusing

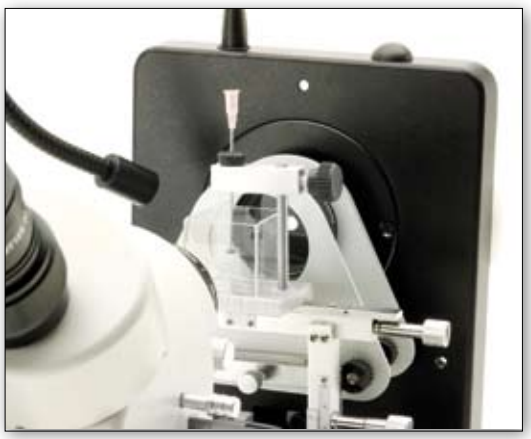
By means of a rack and pinion controlled by a pair of knobs placed on both sides of the stereomicroscope.

Microscope stand

Rack-and-pinion stand (it can be inclined through full 90° for horizontal observation, and rotated 360°). Base: 27x21x6h cm. Weight: 6 Kg.

Illumination

Incident illumination: LED flexible arm with brightness adjustment.
Transmitted illumination: LED system for observation in brightfield (with diffusive LED disc) and darkfield (with side-emitting LED ring).
Through a selector it's possible to choose between 3 modes: brightfield only, darkfield only, or both brightfield and darkfield.
Provided with a lever for the insertion of a black background in order to improve the darkfield observation.
LED temperature color: 6300K (pure white). External power supply provided.
Input: 110/240Vac, 50/60Hz; Output: 12V 1A. Max. required power: 15W.



OPTIGEM Series - Technical specifications

Model	Head	Eyepieces	Objectives	Stand	Illumination
SZM-GEM-1	Binocular	WF10x/20mm	0,7 .... 4,5x Zoom	Pillar stand	**Incident illumination**: dichroic halogen lamp 12V/15W **Transmitted illumination**: Diffusive LED disc for observation in brightfield and side-emitting LED ring for observation in darkfield.
SZM-GEM-2	Trinocular	WF10x/20mm	0,7 .... 4,5x Zoom	Pillar stand	**Incident illumination**: dichroic halogen lamp 12V/15W **Transmitted illumination**: Diffusive LED disc for observation in brightfield and side-emitting LED ring for observation in darkfield.
OPTIGEM-1	Binocular	WF10x/22mm	0,7 .... 4,5x Zoom	Gemological stand	**Incident illumination**: LED flexible arm with brightness adjustment. **Transmitted illumination**: Diffusive LED disc for observation in brightfield and side-emitting LED ring for observation in darkfield.
OPTIGEM-2	Trinocular	WF10x/22mm	0,7 .... 4,5x Zoom	Gemological stand	**Incident illumination**: LED flexible arm with brightness adjustment. **Transmitted illumination**: Diffusive LED disc for observation in brightfield and side-emitting LED ring for observation in darkfield.
OPTIGEM-3	Binocular	WF10x/22mm	0,67 .... 4,5x Zoom	Gemological stand	**Incident illumination**: flexible arm with fluorescent tube 7W(pure white) **Transmitted illumination**: 30W halogen bulb and a dedicated reflecting system for observation with brightfield and darkfield.
OPTIGEM-4	Trinocular	WF10x/22mm	0,67 .... 4,5x Zoom	Gemological stand	**Incident illumination**: flexible arm with fluorescent tube 7W(pure white) **Transmitted illumination**: 30W halogen bulb and a dedicated reflecting system for observation with brightfield and darkfield

OPTIGEM Series - Accessories

Accessories for SZM-GEM - 1/2:

ST-230	Polarizing analisys kit
ST-082	Eyepieces (pair) WF15x/15 mm
ST-083	Eyepieces (pair) WF20x/10 mm
ST-084	Micrometric eyepiece WF10x/20 mm
ST-086	Additional lens 1,5x
ST-087	Additional lens 2x
ST-089	Reflex camera adapter for Full Frame
ST-090	CCD camera adapter (for 1/3" sensors)
ST-090.1	CCD camera adapter (for 1/2" sensors)
ST-173	APS-C Reflex camera adapter

Accessories for OPTIGEM - 3/4:

ST-231	Polarizing analisys kit
ST-142	Eyepieces (pair) WF15x/16mm
ST-143	Eyepieces (pair) WF20x/12mm
ST-144	Eyepieces (pair) WF25x/9mm
ST-145	Micrometric eyepiece WF10x/22mm
SAO1.5	Additional lens 1,5x
SAO2	Additional lens 2x
ST-146	SLR Reflex camera adapter for full frame sensor
ST-147	CCD camera adapter (for 1/3" sensors)
ST-147.1	CCD camera adapter (for 1/2" sensors)
M621	Halogen Bulb 6V/30W
ST-173	APS-C Reflex camera adapter

Accessories for OPTIGEM - 1/2:

ST-201	Iris aperture diaphragm for darkfield
ST-202	Polarizing analisys kit
ST-203	Quartz immersion cell
ST-204	Translating cell holder
ST-205	Vacuum pick-up
ST-082	Eyepieces (pair) WF15x/15 mm
ST-083	Eyepieces (pair) WF20x/10 mm
ST-084	Micrometric eyepiece WF10x/20 mm
ST-086	Additional lens 1,5x
ST-087	Additional lens 2x
ST-089	Reflex camera adapter for Full Frame
ST-090	CCD camera adapter (for 1/3" sensors)
ST-090.1	CCD camera adapter (for 1/2" sensors)
ST-173	APS-C Reflex camera adapter
SZ-PH	Reflex camera adapter
SZ-PHD	Adapter for digital cameras DIGI series

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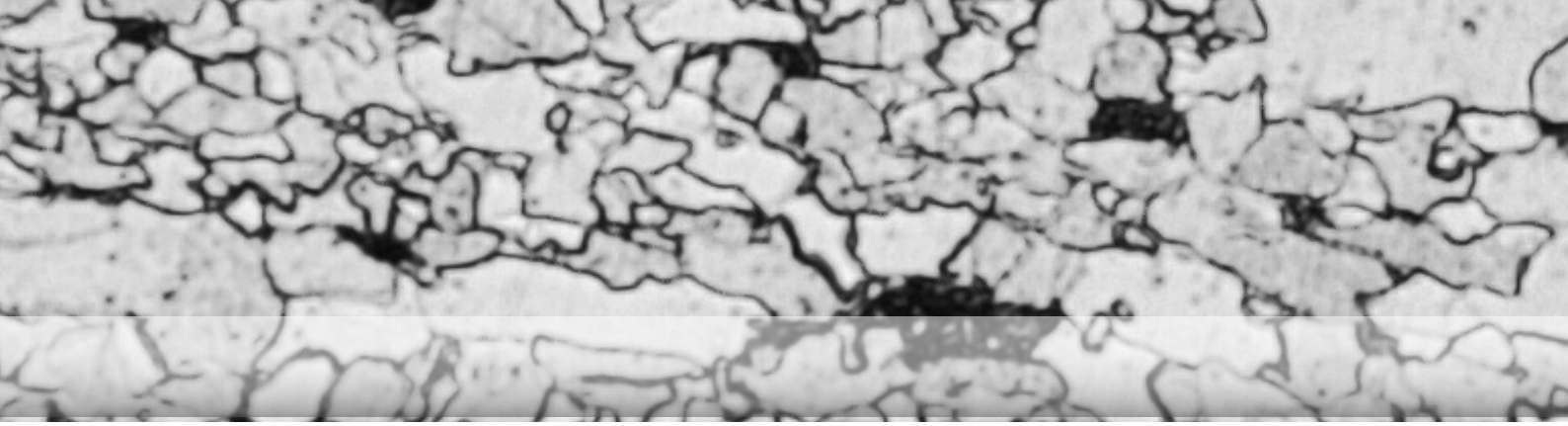
INDUSTRY Series

Metallurgical and measuring microscopes

INDUSTRY



INDUSTRY Series

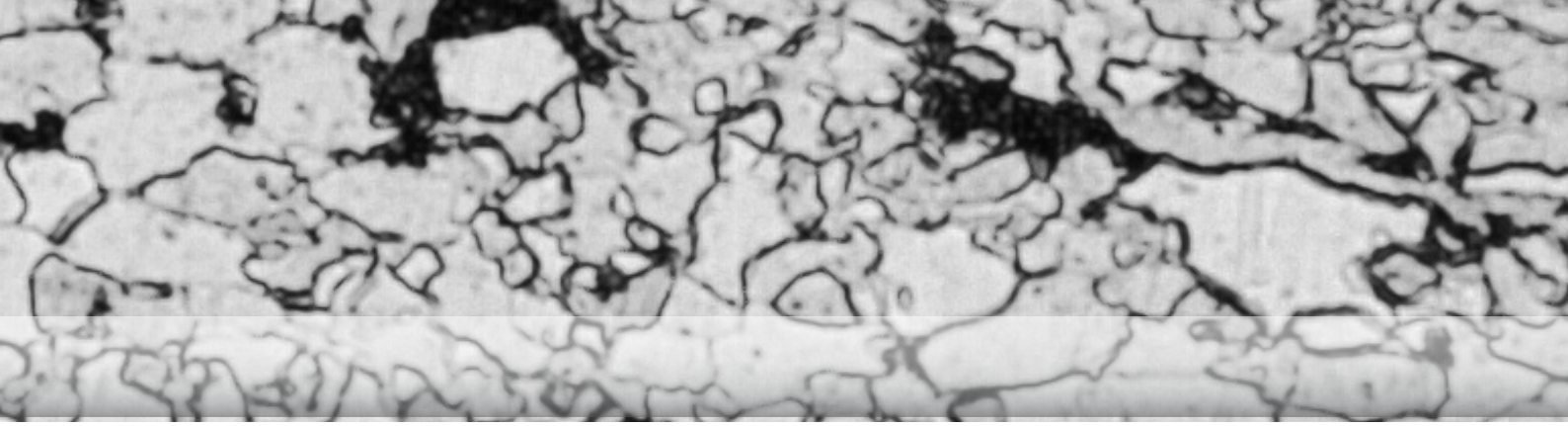
XC-100L	Monocular portable microscope for measurement
XZ-1	Monocular microscope for measurement with pillar stand
XZ-2	Binocular microscope with pillar stand and 8" TFT LCD screen
B-353MET	Trinocular upright metallurgical microscope
B-600MET	Advanced trinocular upright metallurgical microscope
XDS-3MET	Inverted metallurgical microscope

INDUSTRY Series - XC-100L

XC-100L

Portable microscope for measurements. Fitted with WF10x/18mm micrometric eyepiece with cross divided into tenths of a millimetre.

10x achromatic objective (total magnification 100x); focusing controlled by a rack and pinion mechanism; adjustable battery powered penlight lighting unit.



INDUSTRY Series - XZ-1 and XZ-2

XZ-1

Bench monocular microscope for measuring and viewing surfaces with a zoom objective.
Fitted with WF10x/18mm micrometric eyepiece with cross divided into tenths of a millimetre. 0.7...4.5x achromatic zoom objective (max. magnification 45).
Focusing controlled by a rack and pinion mechanism.
Double lighting unit for incident and transmitted light fitted with low voltage halogen bulbs (12V/10W).
Working distance 90 mm.

XZ-2

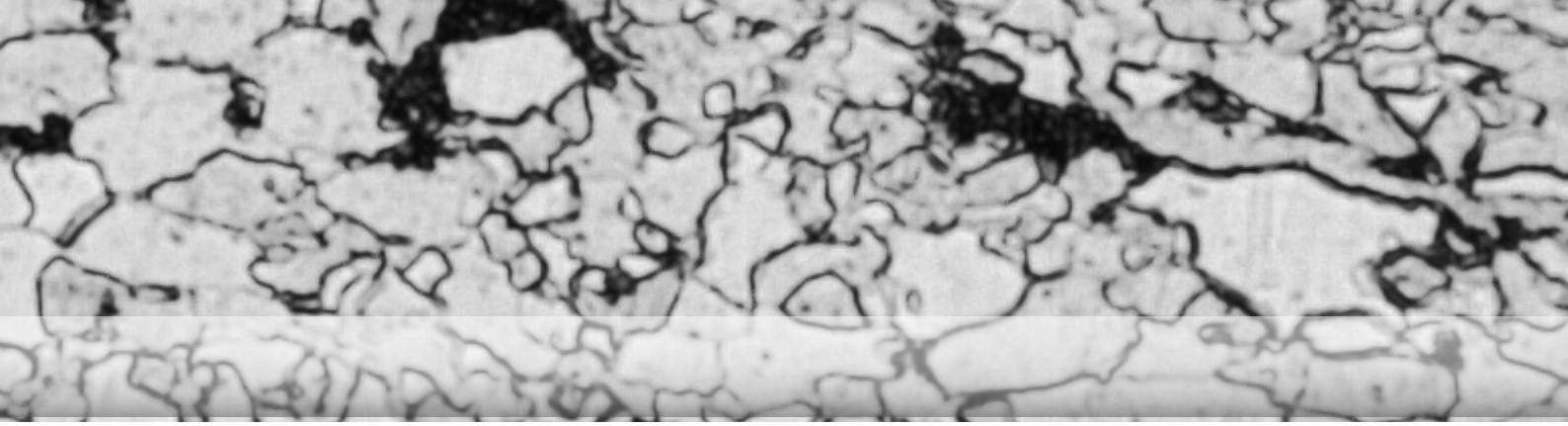
Bench binocular microscope for measuring and viewing surfaces with a zoom objective and TFT LCD screen (8").
0.7x...4.5x achromatic zoom objective.
Focusing controlled by a rack and pinion mechanism.
Working distance: 96 mm.
LED ring light generator with brightness control.
CCD colour camera (380 TVlines).
8" TFT LCD screen with electronic graduated measuring cross.

INDUSTRY Series - B-353MET

B-353MET

Upright metallurgical microscope

Head:	Trinocular, 30° inclined, 360° rotating.
Eyepieces:	WF10X/20mm.
Nosepiece:	5-positions, reversed.
Objectives:	PLAN IOS 4x/0.10, 10x/0.25, 20x/0.40, 50x/0.75 (no cover slide).
Magnifications:	40x, 100x, 200x, 500x.
Focusing system:	Coaxial coarse and fine.
Stage:	Double layer with mechanical sliding stage, 160x142 mm, moving range 76x52 mm.
Condenser:	1.25 N.A., with iris diaphragm, focusable.
Illumination:	3,6W white LED™ with intensity control.
Metallurgical Attachment:	High-power white LED; field and aperture diaphgram.
Filters:	Blue, yellow, frosted, polarizer & analyzer.



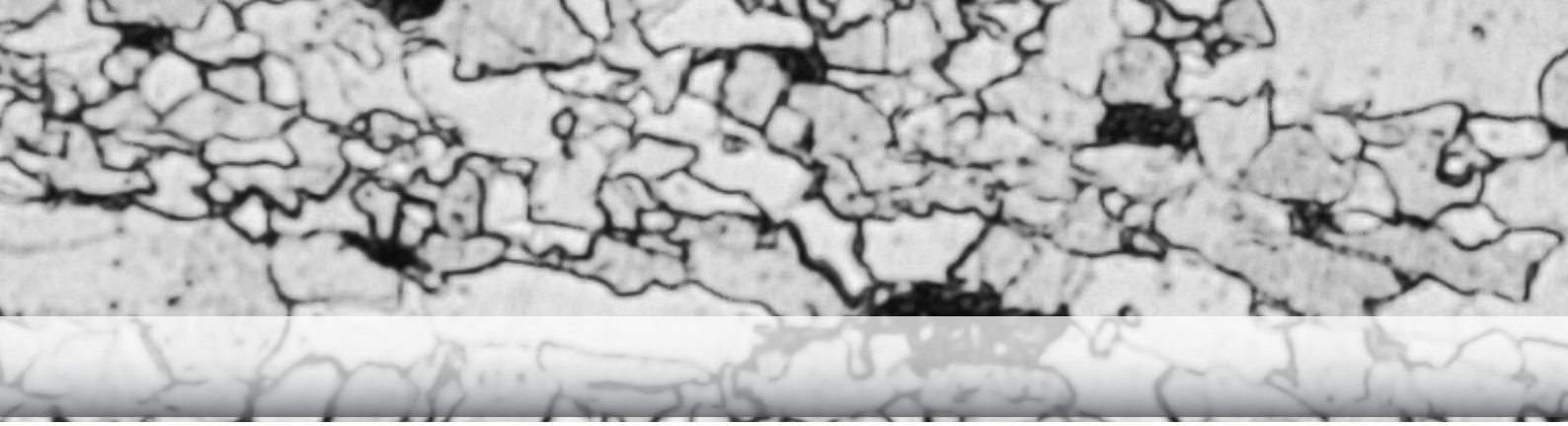
INDUSTRY Series - B-600MET

B-600MET

Upright metallurgical microscope

Head:	Trinocular, 30° inclined, 360° rotating.
Eyepieces:	WF10X/22mm.
Nosepiece:	5-positions, reversed.
Objectives:	PLAN IOS MET (no cover slide) IOS 5x/0.14, 10x/0.25, 20x/0.4, 50x/0.7, 100x/0.9 (dry).
Magnifications:	50x, 100x, 200x, 500x, 1000x.
Focusing system:	Coaxial coarse and fine.
Stage:	Double layer with mechanical sliding stage, 175x145 mm, moving range 76x52 mm.
Condenser:	0,7 N.A. swing-out type, with iris diaphgram, centrable and focusable.
Illumination:	12V/50W halogen bulb in external case or X-LED^{8} ™ illumination system. In both systems the light is centrable and brightness is adjustable.
Metallurgical Attachment:	High-power white X-LED™ system with brightness control; field and aperture diaphragms (centrable). Simple sliding darkfield system.
Filters:	Blue, polarizer & analyzer.

B-600MET

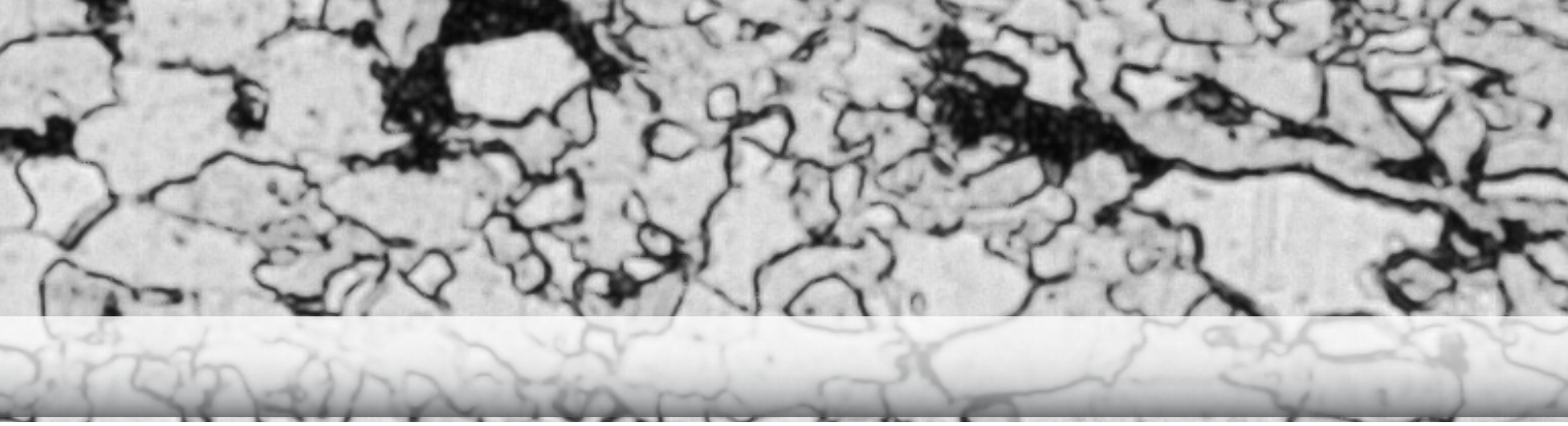


INDUSTRY Series - XDS-3MET

XDS-3MET

Inverted metallurgical microscope

Head:	Trinocular, 45° inclined.
Eyepieces:	WF10X/22mm.
Nosepiece:	5-positions.
Objectives:	LWD PLAN IOS MET (no cover slide): 5x/0.14, 10x/0.25, 20x/0.4, 50x/0.7.
Magnifications:	50x, 100x, 200x, 500x.
Focusing system:	Coaxial coarse and fine.
Stage:	250x230mm; mechanical stage with lowered ergonomic coaxial controls. X-Y range: 114x81mm.
Diaphragms:	Field and aperture diaphragms (centrable).
Illumination:	12V/50W halogen bulb in external case. Centrable bulb and brightness control.
Filters:	Blue, polarizer & analyzer.



INDUSTRY Series - Technical specifications

Model	Head	Eyepieces	Objectives	Working Distance	Stand	Illumination
XC-100L	Monocular	WF10x/18mm micrometric	10x	7,7 mm	Portable stand	**Incident illumination**: xenon penlight
XZ-1	Monocular	WF10x/18mm	0,7 .... 4,5x Zoom	90 mm	Pillar stand	**Incident illumination:** halogen bulbs 12V/10W **Transmitted illumination:** halogen bulbs 12V/10W
XZ-2	Binocular	WF10x/18mm	0,7 .... 4,5x Zoom	96 mm	Pillar stand with 8" TFT LCD sceen	**Incident illumination:** LED ring light with brighness control

Model	Head	Eyepieces	Objectives	Nosepiece	Stage	Focusing	Condenser	Illumination
B-353MET	Trinocular	WF10x/ 22mm	Planachromatic IOS 4x, 10x, 20x, 50x (no cover slide)	Quintuple reversed	Double layer mechanical sliding stage, 160x142 mm, moving range 76x52 mm	Coaxial coarse and fine system, with limit stop	Brightfifield condenser: 1.25 N.A. Abbe type, with iris diaphragm, focusable	Transmitted illumination: X-LED™ Metallurgical Attachment: High-power white LED with field and aperture diaphgram.
B-600MET	Trinocular	WF10x/ 22mm	Planachromatic IOS MET (no cover slide) 5x, 10x, 20x, 50x, 100x (dry)	Quintuple reversed	Double layer with mecha-nical sliding stage, 175x145 mm, moving range 76x52 mm	Coaxial coarse and fine system, with limit stop	Brightfifield condenser: 0,7 N.A. swing-out type, with iris diaphgram, centrable and focusable	**Transmitted illumination:** 12V/50W halogen bulb in external case or X-LED[8] ™ illumination system. **Metallurgical Attachment:** High-power white X-LED™ system with brightness control.
XDS-3MET	Trinocular	WF10x/ 22mm	LWD PLAN IOS MET (no cover slide) 5x, 10x, 20x, 50x	Quintuple reversed	250X230mm; mechanical stage with lowered ergo-nomic coaxial controls. X-Y range: 114x81 mm	Coaxial coarse and fine system, with limit stop	----------	12V/50W halogen bulb in external case. Centrable bulb and brightness control.

XC-100L - Measuring microscope

M-899	Pen illuminator

XZ-1 - Measuring monozoom microscope

M-001	Eyepiece H5x
M-003	Eyepiece WF16x/12mm
M-005	Micrometric slide 26x76 mm, range 1 mm, div. 0,01 mm.
ST-012	Object-plate white/black, type 2 dia. 95 mm
ST-014	Glass stage, type 2, dia. 95 mm
ST-028	Halogen bulb 12V/10W
M-013	Halogen bulb, with dichroic mirror 12V/10W
ST-029	Dust cover type 12

XZ-2 - Measuring monozoom videomicroscope

M-001	Eyepiece H5x
M-003	Eyepiece WF16x/12mm
M-004	Eyepiece micrometer WF10x/18mm.
M-005	Micrometric slide 26x76 mm, range 1 mm, div. 0,01 mm.

B-600MET - Upright metallurgical microscope

M-680	Ergo Binocular Head 30°-60°
M-625	Eyepiece EWF10x/22mm
M-601	Eyepiece WF15x/16mm
M-602	Eyepiece micrometer EWF10x/22mm
M-005	Micrometric slide 26x76 mm, range 1 mm, div. 0,01 mm.
M-693.1	Objective IOS planachromatic 5x/0.14 (no cover slide)
M-694.1	Objective IOS planachromatic 10x/0.25 (no cover slide)
M-695.1	Objective IOS planachromatic 20x/0.40 (no cover slide)
M-696.1	Objective IOS planachromatic 50x/0.70 (no cover slide)
M-698.2	Objective IOS planachromatic 100x/0.90 DRY (no cover slide)
M-613	Polarising set (filters only) for transmitted light
M-615	Lambda filter for polarising set for transmitted light
M-614	Rotating table for polarising set
M-619	Photo tube adapter for SLR cameras Full Frame
M-699	Photo tube adapter for DIGI digital camera series
M-620	CCD camera adapter (for 1/3" sensors)
M-620.1	CCD camera adapter (for 1/2" sensors)
M-622	Halogen bulb 12V/50W
M-034	Dust cover type 5
M-975	Blue filter, 45 mm diameter for transmitted light
M-977	Green filter, 45 mm diameter for transmitted light
M-979	Yellow filter, 45 mm diameter for transmitted light
M-989	Frosted glass filter, 45 mm diameter
M-690	Eyecup (pair)
M-173	APS-C Reflex camera adapter

B-353MET - Upright metallurgical microscope

M-301	Eyepiece high-point WF10x/20mm
M-302	Eyepiece high-point WF16x/12mm
M-303	Eyepiece micrometer high-point WF10x/20mm
M-005	Micrometric slide 26x76 mm, range 1 mm, div. 0,01 mm
M-330	Objective IOS Planachromatic 4x/0.10
M-331	Objective IOS Planachromatic 10x/0.25
M-332	Objective IOS Planachromatic 20x/0.40
M-333	Objective IOS Planachromatic 40x/0.65
M-335	Objective IOS Planachromatic 50x/0.75 (no cover glass)
M-334	Objective IOS Planachromatic 100x
M-365	Photo tube adapter for SLR cameras Full Frame
M-366	CCD camera adapter
M-031	Dust cover type 3
M-173	APS-C Reflex camera adapter

XDS-3MET - Inverted metallurgical microscope

M-625	EWF10x/22mm Eyepiece
M-601	WF15x/16mm Eyepiece
M-602	Micrometer Eyepiece EWF10x/22mm
M-005	26x76 mm micrometric slide. Range 1mm, div. 0,01mm
M-735	LWD 5x/0.14 IOS plan achromatic objective (no cover slide)
M-736	LWD 10x/0.25 IOS plan achromatic objective (no cover slide)
M-737	LWD 20x/0.40 IOS plan achromatic objective (no cover slide)
M-738	LWD 50x/0.70 IOS plan achromatic objective (no cover slide)
M-746	LWD 100x/0.80 IOS plan achromatic objective (no cover slide)
M-619	Photo tube adapter for SLR cameras full frame
M-699	Photo tube adapter for DIGI digital camera series
M-789	CCD camera adapter
M-622	12V/50W halogen bulb
M-036	Dust cover type 7
M-173	APS-C Reflex camera adapter

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DIGITAL MICROSCOPES AND CAMERAS

DIGITAL MICROSCOPES AND CAMERAS

DM SERIES - Biological digital microscopes page 169

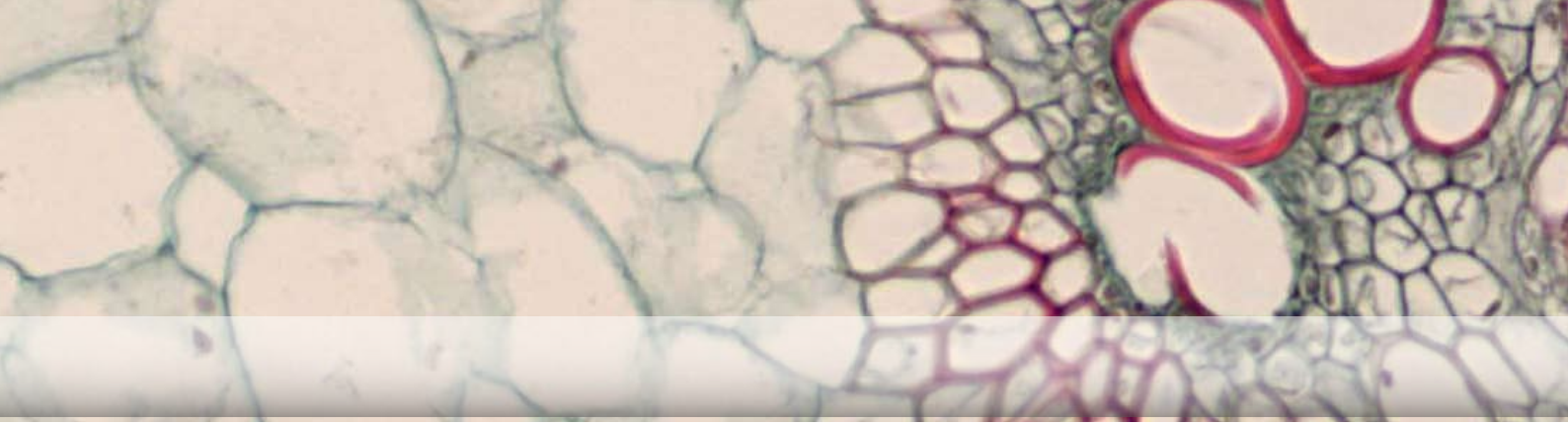
SZM-D - Digital stereozoom microscope page 181

VIDEO AND PHOTO APPLICATIONS - Video and photo cameras page 185

DM Series

Digital biological microscopes

DM

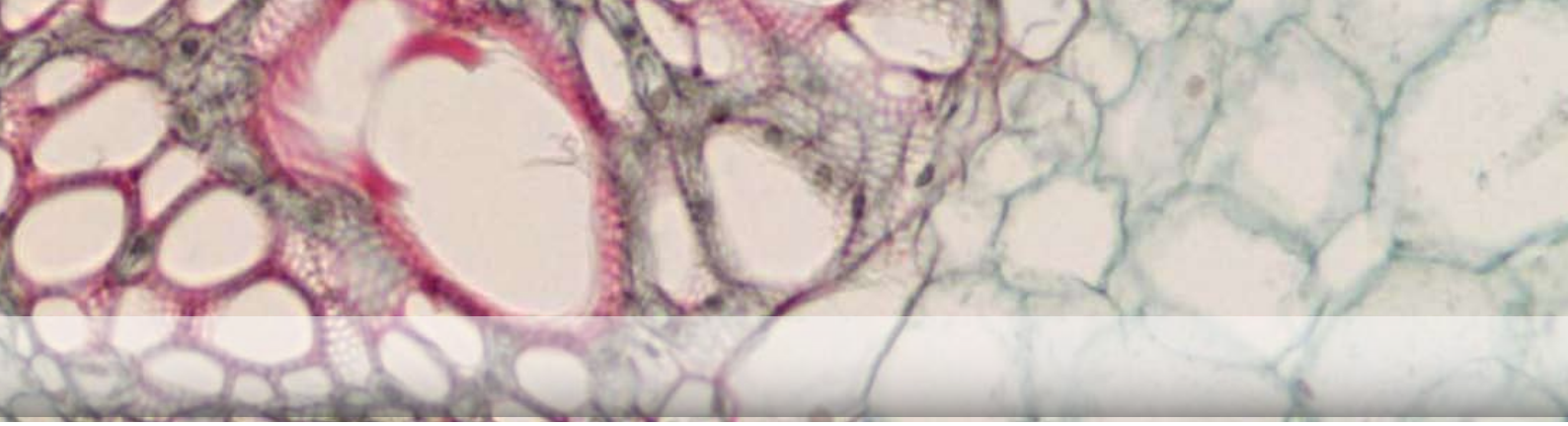


DM Series - Digital microscopes

The OPTIKA digital microscopes are the easiest instruments to capture pictures from a microscope and transfer them to a pc.
In addition, the entire OPTIKA digital series ensures a remarkable quality.

The whole range, from the didactic to the laboratory models, is well equipped and comes with a complete "plug and play" software package.

DM-2	Desktop/hand held digital microscope
DM-5	Monocular digital microscope
DM-5UP	USB powered monocular digital microscope
B-150DM	Monocular digital microscope
B-150DB	Binocular digital microscope
DM-15	Binocular digital microscope
DM-20	Binocular digital microscope, PL objectives
DM-25	Binocular microscope, with LCD screen



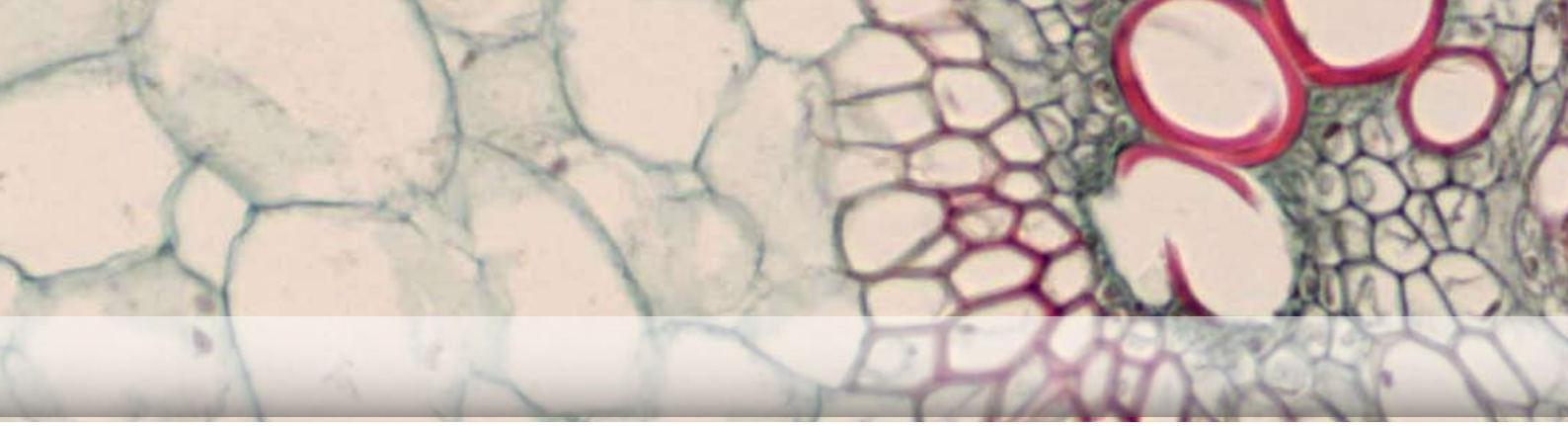
DM Series - DM-2

Technical Features

Magnification:	Up to 200x
Digital camera resolution:	1/3" COMS SXGA 1600x1200 Image Sensor
Functions:	Linear size measurement function Snapshots Video capture
Illumination:	White LED (Top and Bottom light) 11 levels of Brightness Illumination
Output:	USB2.0 High speed
Software:	Software: Expert Prima Compatible with Windows XP/Vista/Seven 32 and 64bit Installation CD User Manual
Accessories Included:	Tweezers Calibration Plate USB Cable
Dimensions:	Dimensions: ~120x170x250mm Weight: ~0.5kg

DM-2

Desktop/hand held digital microscope

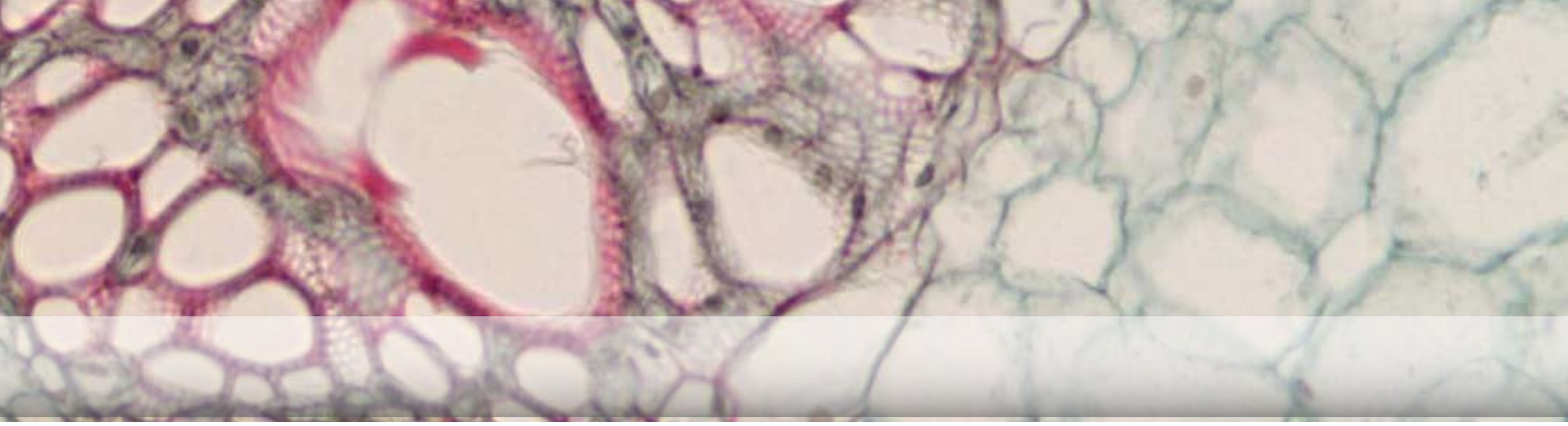


DM Series - DM-5

Belonging to the "entry-level" models among OPTIKA digital biological microscopes, the DM-5 is ideal for primary schools.

This easy-to-use microscope, combined with a high construction quality and top-class optical system makes the study of biology a real pleasant experience.

The microscope comes with all necessary equipment, thus allowing an immediate use without the need of additional accessories.



DM Series - DM-5

Technical Features

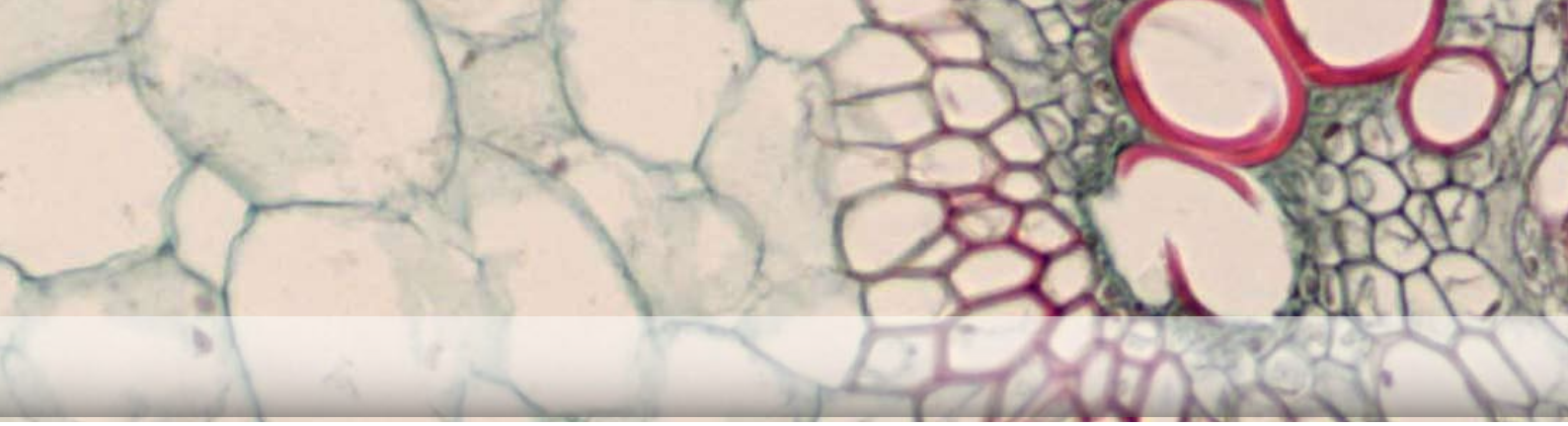
Head:	Digital, monocular, 360° rotating, 45° inclined
Eyepiece:	WF10x/16mm
Nosepiece:	Triple, reversed
Objectives:	Achromatic 4x (0.10), 10x (0.25), 40x (0.65)
Working stage:	Rotating round stage dia. 90mm; moving range: 5mm; slide clips
Focusing system:	Coarse and fine with different axis
Illumination:	White led, non-rechargeable, with brightness control
Digital camera resolution:	800X600pixels (0.48Mp)
Output:	2.0 USB port
Software:	OPMIAS (Optika Micro Image Analysis Software), for Windows XP/Vista/Seven, 32-64 bit
Packing:	Carton box with inner foam

DM Series - DM-5UP

Monocular digital microscope

Same as DM-5, but with illuminator powered by your PC through USB connection.

USB POWERED OR EXTERNAL POWERED

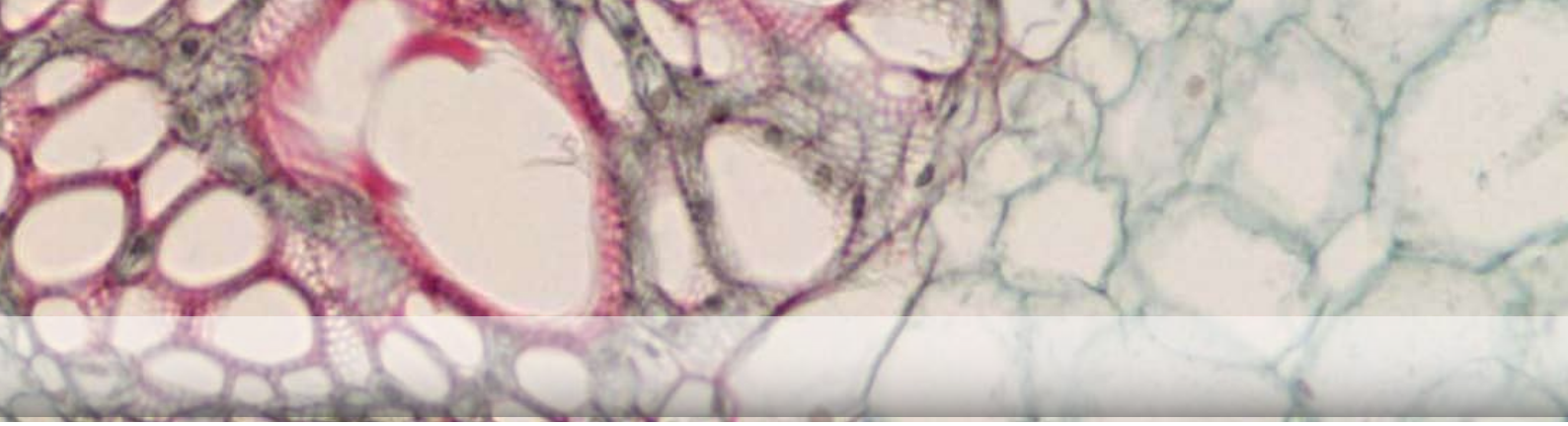


DM Series - B-150DM

An intermediate model among OPTIKA digital biological microscopes, the B-150DM and B-150DB are the best solution for secondary school students. The main strengths are its optical and mechanical qualities, and its particularly rich setup, as it consists of a mechanical stage with coaxial knobs and a set of high-quality achromatic objectives.

B-150DM: Technical Features

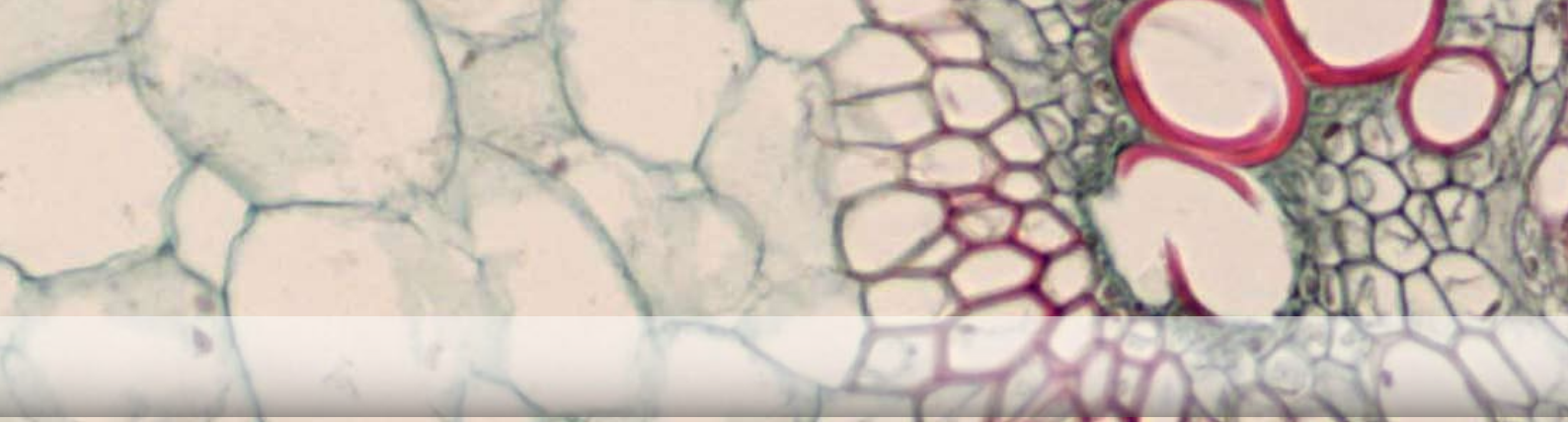
Head:	Digital, Monocular, 360° rotating, 45° inclined
Eyepiece:	WF10X/18mm
Nosepiece:	Triple
Objectives:	Achromatic 4x (0.10), 10x (0.25), 40x (0.65).
Working stage:	Double layer with mechanical sliding stage, 125x115mm, moving range: 50x30mm
Condenser:	1.25 N.A. Abbe type
Focusing system:	Coaxial coarse and fine, with focusing stop mechanism
Illumination:	1W White LED, non-rechargeable, with brightness control
Digital camera resolution:	1280x1024 pixels (1.3Mp)
Output:	2.0 USB port
Software:	OPTIKA Vision Lite for Windows XP/Vista/Seven, 32-64 bit
Packing:	Carton box with inner foam



DM Series - B-150DB

B-150DB: Technical Features

Head:	Digital, Binocular, 360° rotating, 30° inclined
Eyepiece:	WF10X/18mm
Nosepiece:	Quadruple
Objectives:	Achromatic 4x (0.10), 10x (0.25), 40x (0.65), 100x (1.25).
Working stage:	Double layer with mechanical sliding stage, 125x115mm, mov. range 50x30mm
Condenser:	1.25 N.A. Abbe type
Focusing system:	Coaxial coarse and fine, with focusing stop mechanism
Illumination:	1 watt white LED, non-rechargeable, with brightness control
Digital camera resolution:	2048x1536 pixels (3.14Mp)
Output:	2.0 USB port
Software:	OPTIKA Vision Lite for Windows XP/Vista/Seven, 32-64 bit
Packing:	Carton box with inner foam



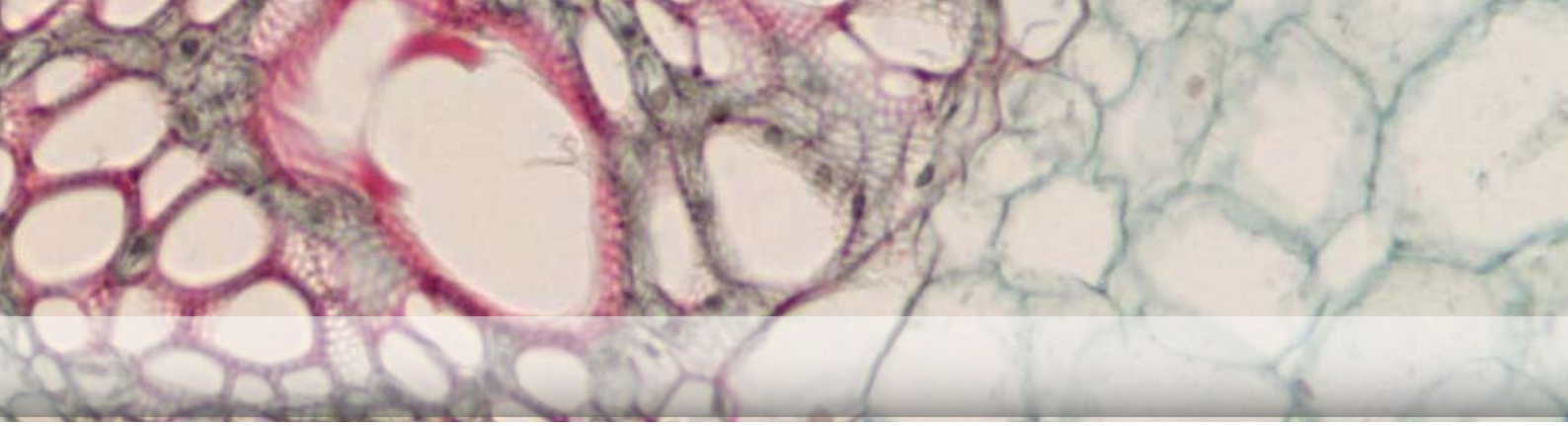
DM Series - DM-15

An advanced model among OPTIKA digital biological microscopes, the DM-15 is especially designed for biology teachers. The included 2Mpixel digital camera is its main feature.
The microscope DM-15 has a binocular head designed for a 20mm field of vision, ideal for teachers.
Its structure, mounted components and high-quality optical and mechanical systems make it an ideal instrument for professional use.

DM-15

Technical Features

Head:	Digital, Binocular, 360° rotating, 30° inclined
Eyepiece:	WF10X/20mm
Nosepiece:	Quadruple, reversed
Objectives:	Achromatic 4x (0.10), 10x (0.25), 40x (0.65), 100x (1.25) (oil immersion)
Working stage:	Double layer with mechanical sliding stage, 160x142mm, mov. range 76x52mm
Focusing system:	Coaxial coarse and fine, with focusing stop mechanism
Condenser:	1.25 N.A. Abbe type, with centring system
Illumination:	X-LED system with brightness control
Digital camera resolution:	1600x1200pixels, 2.0M
Output:	USB 2.0 port
Software:	OPMIAS (Optika Micro Image Analysis Software) for Windows XP/Vista/ Seven, 32-64 bit
Packing:	Carton box with inner foam



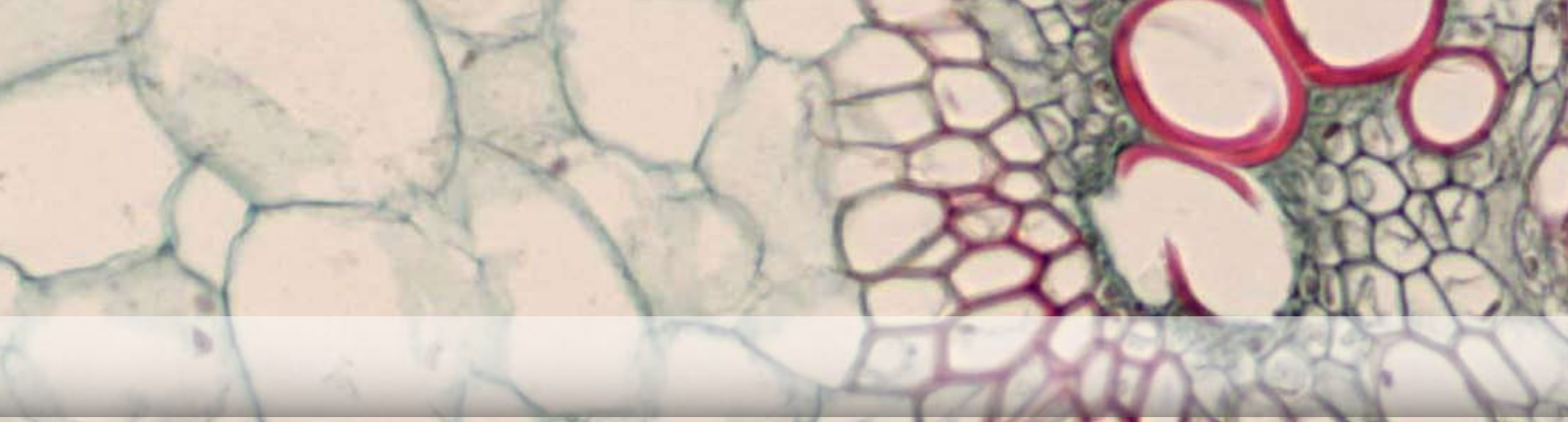
DM Series - DM-20

The most advanced model among OPTIKA digital biological microscopes, the DM-20 is an upgrade over the DM-15 model.
The digital camera mounted on its binocular head has a 3.2Mpixel resolution and all objectives are planachromatic.
Its advanced features and excellent optical and mechanical characteristics make it a point of reference in the field of digital microscopy.

DM-20

Technical Features

Head:	Digital, Binocular, 360° rotating, 30° inclined
Eyepiece:	WF10X/20mm
Nosepiece:	Quadruple, reversed
Objectives:	PLAN Achromatic 4x (0.10), 10x (0.25), 40x (0.65), 100x (1.25) (oil immersion)
Working stage:	Double layer with mechanical sliding stage, 160x142mm, mov. range 76x52mm
Focusing system:	Coaxial coarse and fine, with focusing stop mechanism
Condenser:	1.25 N.A. Abbe type, with centring system
Illumination:	X-LED system with brightness control
Digital camera resolution:	2048x1536pixels, 3.2M
Output:	USB 2.0 port
Software:	OPMIAS (Optika Micro Image Analisys Software) for Windows XP/Vista/Seven, 32-64 bit
Packing:	Carton box with inner foam



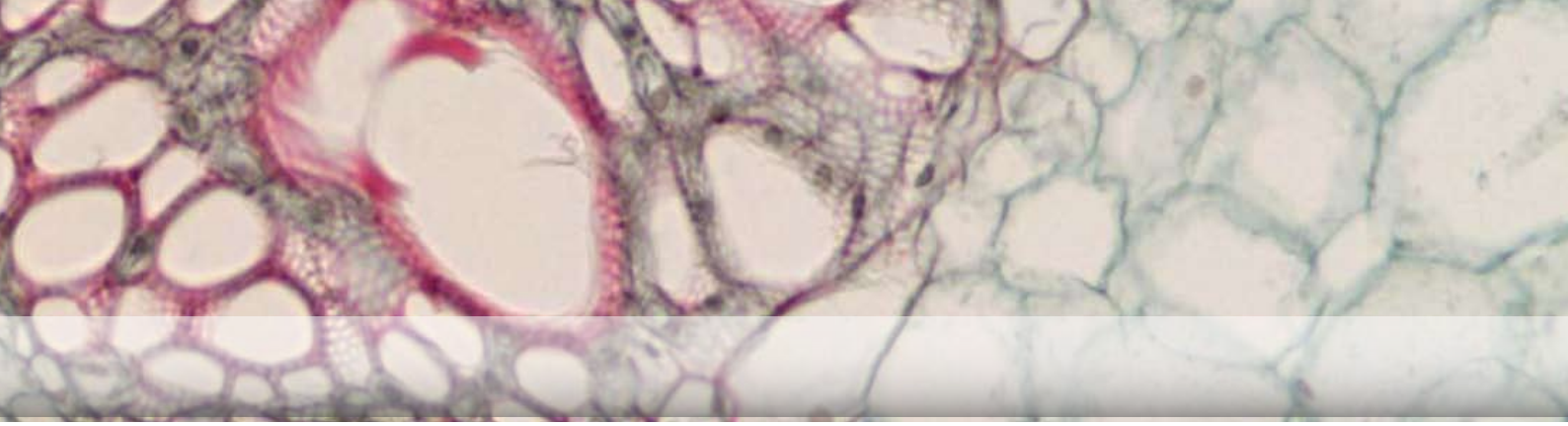
DM Series - DM-25

This model is similar to the DM-15 but it is provided with a 3,14Mpixels camera with a 2,5" LCD screen.
The camera also has an extra output for the analog video signal (S-video and PAL), that allows the camera to be directly connected to a TV set. 16MB of internal memory with an additional slot for flash memory card (up to 3GB). Maximum video resolution: 640x480 pixels.

- built-in 2.5" LCD screen (rotating and tilting)
- Zoom function
- Internal picture storing function
- Video storing function
- SD memory card slot
- 1GB SD card included
- Video output
- USB output (to PC)

Technical Features

Head:	Digital, Binocular, 360° rotating, 30° inclined
Eyepiece:	WF10X/20mm
Nosepiece:	Quadruple, reversed
Objectives:	Achromatic 4x, 10x, 40x, 100x (oil immersion)
Working stage:	Double layer with mechanical sliding stage, 160x142mm, moving range 76x52mm
Focusing system:	Coaxial coarse and fine, with focusing stop mechanism
Condenser:	1.25 N.A. Abbe type, with centring system
Illumination:	X-LED system with brightness control
Digital camera resolution:	2048x1536pixels, 3.14M
Output:	2.0 USB port, S-Video port, AV port
Software:	OPTIKA Vision Lite for Windows XP/Vista/Seven, 32-64 bit
Packing:	Carton box with inner foam



DM Series - Technical specifications

	DM-5	B-150DM	B-150DB	DM-15	DM-20	DM-25
Resolution	800x600 pixels (0.48 Mp)	1280x1024 pixels (1.3Mp)	2048x1536 pixels (3.14Mp)	1600x1200 pixels (2.0Mp)	2048x1536 pixels (3.1Mp)	2048x1536 pixels (3.14Mp)
Sensor	1/4"CMOS	1/2"CMOS	1/3"CMOS	1/3"CMOS	1/2"CMOS	1/2"CMOS
Pixel Size	7,9x7,9 µm	5,12x5,12 µm	2,18x2,18 µm	2,8x2,8 µm	3,2x3,2 µm	3,18x3,18 µm
Resolution & Frame Rate	800x600 25 fps"	1280x1024 15 fps	2048x1536 6 fps	1600x1200 15 fps	2048x1536 6 fps	
		1024x768 20 fps	1280x1024 15 fps	800x600 30 fps	1280x1024 15 fps	
			1024x768 20 fps		1024x768 20 fps	640x480 25fps
Digital camera resolution						2048x1536 3,14Mpixels
Sensitivity	2.0 V/Lux-sec	1.0 V/Lux-sec	1.0 V/Lux-sec	1.0 V/Lux-sec	1.0 V/Lux-sec	1.0 V/Lux-sec
White Balance	Auto / Manual	Auto / Manual	Auto / Manual	Auto / Manual	Auto / Manual	Auto / Manual
S/N Ratio	≥50 dB	≥ 52 dB	≥ 52 dB	≥ 56 dB	≥ 52 dB	≥ 52 dB
Dynamic Range	≥ 60 dB	≥ 60 dB	≥ 60 dB	≥ 71 dB	≥ 60 dB	≥ 60 dB
Digital Port	USB 2.0	USB2.0	USB2.0	USB2.0	USB2.0	USB2.0
Imaging Software	OPMIAS	OPTIKA Vision Lite	OPTIKA Vision Lite	OPMIAS	OPMIAS	OPTIKA Vision Lite
System Requirements	RAM: 256 MB (512 MB recommended)					
	Video card: Separate card (64 MB or higher)					
	Operating system: Windows XP (SP2, SP3), Vista and Seven, 32-64 bit					

DM Series - Accessories

DM-5 - DM-5UP

M-044	Eyepiece WF10x/16mm
M-727	Achromatic objective 4x/0.10
M-728	Achromatic objective 10x/0.25
M-729	Achromatic objective 40x/0.65
M-030	Dust cover, type 1

B-150DM - B-150DB

M-001	Eyepiece H5x
M-002.1	Eyepiece WF10x/18mm
M-003	Eyepiece WF16x/12mm eyepiece
M-004	Micrometer eyepiece WF10x/18mm
M-137	Achromatic objective 4x/0.10
M-138	Achromatic objective 10x/0.25
M-139	Achromatic objective 20x/0.40
M-141	Achromatic objective 40x/0.65
M-142	Achromatic objective 60x/0.85
M-143	Achromatic objective 100x/1.25 (oil)
M-031	Dust cover, type 3

DM-15 - DM-25

M-301	Eyepiece high-point WF10x/20mm
M-302	Eyepiece high-point WF16x/12mm
M-303	Micrometer eyepiece high-point WF10x/20mm
M-005	Micrometric slide 26x76 mm. Range: 1mm, div.: 0,01mm
M-310	Objective achromatic 4x/0.10
M-311	Objective achromatic 10x/0.25
M-312	Objective achromatic 20x/0.40
M-313	Objective achromatic 40x/0.65
M-314	Objective achromatic 60x/0.80
M-315	Objective achromatic 100x/1.25 (oil)
M-031	Dust cover type 3

DM-20

M-301	Eyepiece high-point WF10x/20mm
M-302	Eyepiece high-point WF16x/12mm
M-303	Micrometer eyepiece high-point WF10x/20mm
M-005	Micrometric slide 26x76 mm. Range: 1mm, div.: 0,01mm
M-320	Objective planachromatic 4x/0.10
M-321	Objective planachromatic 10x/0.25
M-322	Objective planachromatic 20x/0.40
M-323	Objective planachromatic 40x/0.65
M-324	Objective planachromatic 60x/0.80
M-325	Objective planachromatic 100x/1.25 (oil)
M-031	Dust cover type 3

OPTIKA SRL
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Alpha Optika Microscopes Hungary
2030 ÉRD, Kaktusz u. 22.- HUNGARY - Tel.: (23) 520-077 Fax: (23) 374-965

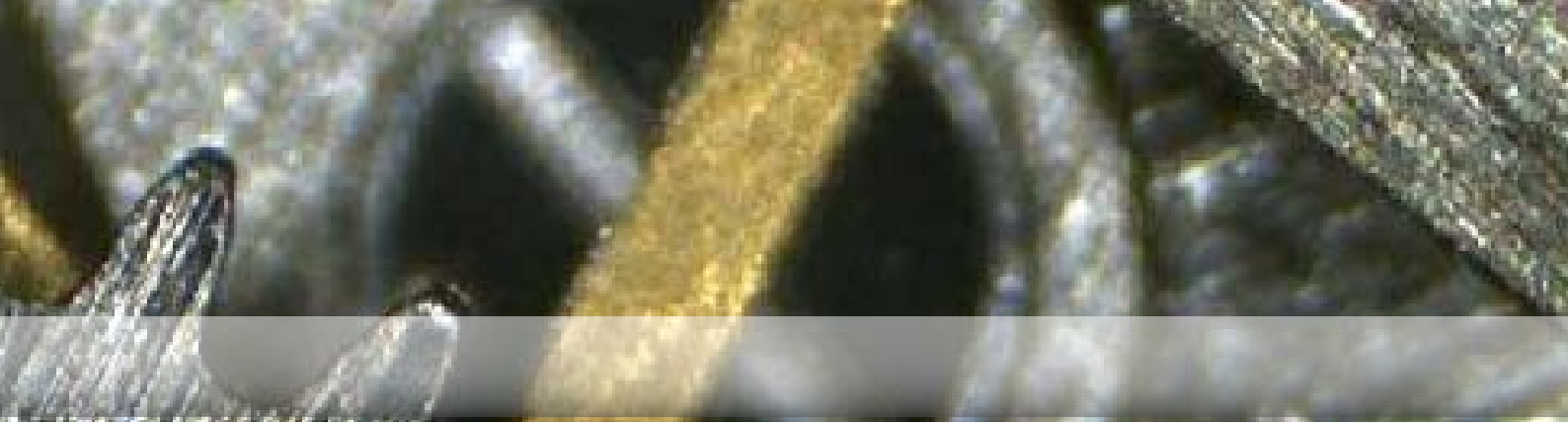
SZM-D

Digital stereozoom microscope

SZM-D

SZM-D

The stereomicroscopes of the SZM series are instruments specifically designed for laboratory and industry applications.
Their optical and mechanical qualities place them at the top of that sought-after category of appliances and the price/quality ratio is exceptionally good.
Sharing the same optical system consisting of binocular and trinocular heads with zoom objectives, the four models of the SZM series find their proper application wherever professional instruments are required at a particularly contained cost.
The numerous accessories provide an ample choice of possible configurations and extend the flexible use of the instruments.
SZM-D stereozoom microscope is our best option when an ease of use and a good quality for the image are required.
By using the built-in camera with its USB port the connection with the pc will be simple and quick.



SZM-D - Technical specifications

Model	Head	Objectives	Stand	Illumination
SZM-D	Binocular	0,7 .... 4,5x Zoom	Pillar stand	Incident and transmitted 12V/15W halogen with separated brightness controls

Technical features of the built-in camera	
Resolution	1280 x 1024 pixels (1.3 M pixels)
Sensor	CMOS 1/2”
Pixel Size	5.2 µm x 5.2 µm
Imaging Area	6.67 mm x 5.33 mm
Frame Rate at Full Resolution	7.5 frames/sec (fps)
Frame Rate at Half Resolution	15 frames/sec (fps)
Optical Format	1/2”
Aspect Ratio	5:4
S/N Ratio	max 45 dB
Dynamic Range	68.2 dB
ADC	10 bit
Data Output (Uncompressed Video)	3x8 bit
Exposure Range	0-70 msec
Sensitivity	1,0V/Lux-second
C-Mount Lens Adapter	no
System Requirements	Widows 2000 / XP SP2 / Vista / Seven 32bit, USB 2.0
Software	Optika Vision Lite, TWAIN interface, several freeware for image elaboration
Capture Features	Continuous auto white balance, continuous auto exposure
Included with the camera	Optika Vision Lite package, 1.5 m USB cable.

SZM-D - Accessories

ST-081	Eyepieces (pair) WF10x/20 mm
ST-082	Eyepieces (pair) WF15x/15 mm
ST-083	Eyepieces (pair) WF20x/10 mm
ST-084	Micrometric eyepiece WF10x/20 mm
ST-085	Additional lens 0,5x (w.d. 165mm)
ST-091	Additional lens 0,75x (w.d. 117mm)
ST-086	Additional lens 1,5x (w.d. 47mm)
ST-087	Additional lens 2x (w.d. 26mm)
ST-088	Polarising set (filters and rotating stage)
ST-040	Darkfield condenser
ST-041	Sample clip
ST-100	Hand moving stage
ST-036	Eye cups (pair) type 2
ST-012	White/black object-plate, type 2 dia. 95 mm
ST-014	Glass stage, type 2, dia. 95 mm
ST-038	Halogen bulb, 12V/15W
ST-037	Halogen bulb, 12V/15W, with dichroic mirror
ST-033	Dust cover type 13

OPTIKA SRL
Via Rigla, 30 - 24010 Ponteranica (BG) - ITALIA - Tel.: +39 035 571392 (6 linee r.a.) Fax: +39 035 571435 - info@optikamicroscopes.com

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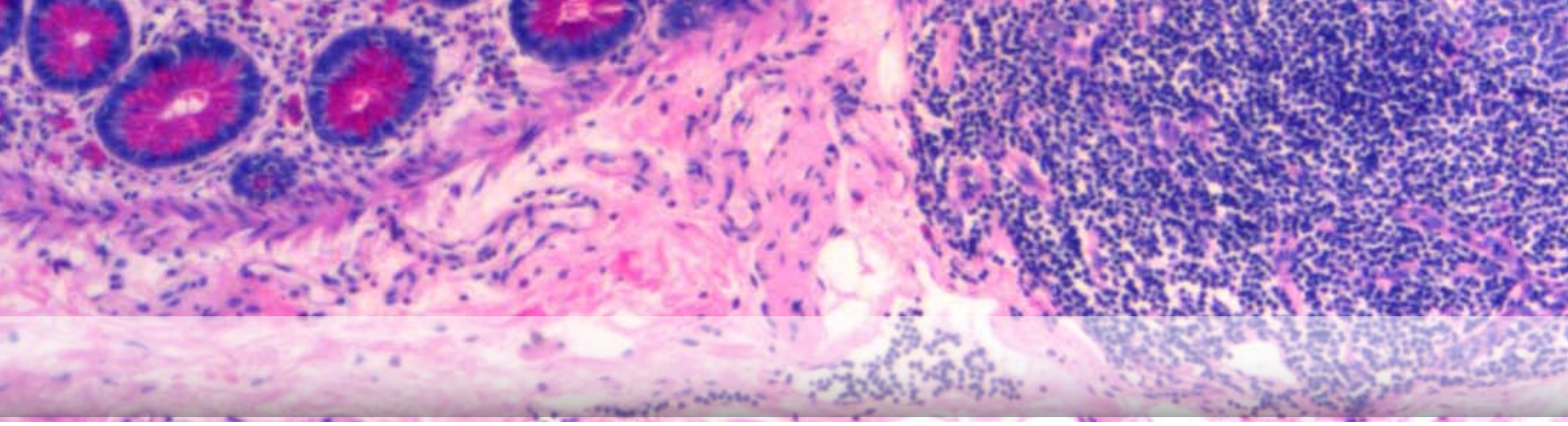
VIDEO AND PHOTO APPLICATIONS

Video and photo cameras

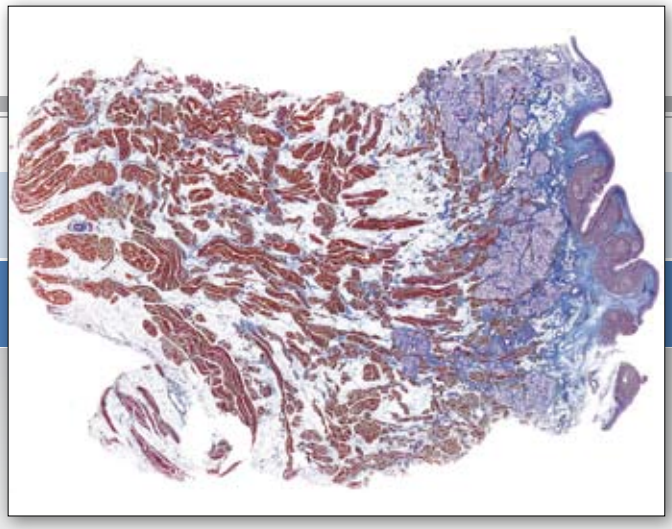
VIDEO AND PHOTO APPLICATIONS

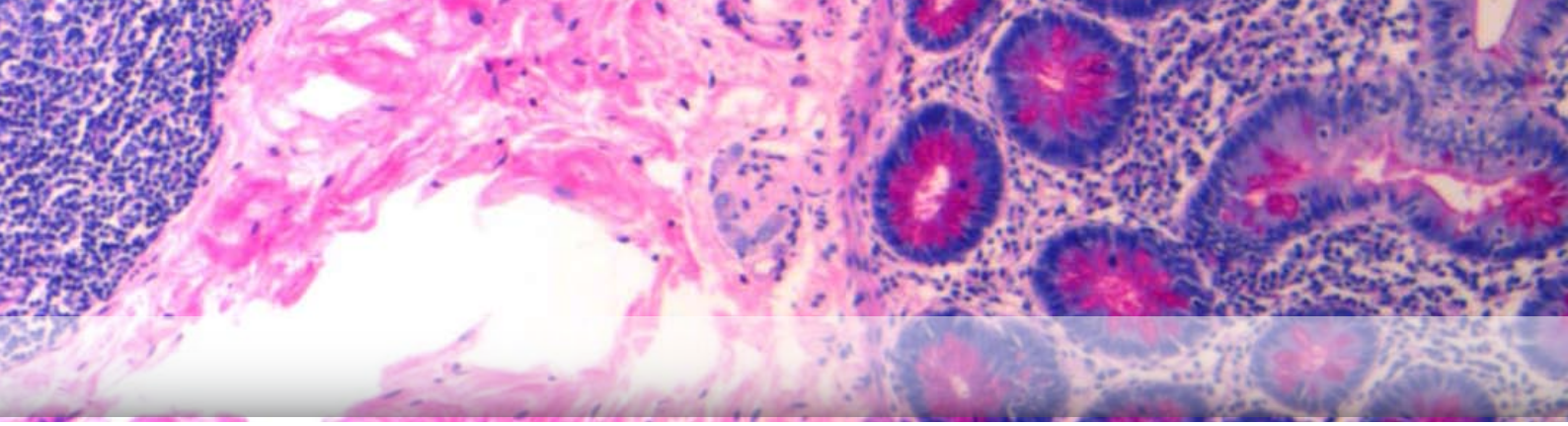


OPTIKAM® Cameras

A wide range of instruments fulfilling any requirement in the photo/video field. It has never been so easy to get impressive images from your microscope. Thanks to different resolutions, all digital cameras (to be used with PC or TV set) can meet the demands of either a professional user or people who are looking for an economic but valuable product.
Several models (OPTIKAM B2, Pro LT models, and pro Cool 5) are designed to be used on trinocular microscopes by using specific adapters (optional accessories). It will be easy to connect these instrument to any microscope, biological or stereo, by C-mount.
The models with optical eyepiece adapter are ready to be used (by means of one of the two eyepieces) on monocular and binocular microscopes too, both biological and stereo.

OPTIKAM Budget Series	USB cameras for general purpose
OPTIKAM Pro Series	High Performance cameras with advanced software package
OPTIKAM CCD Cooled Camera	Very high-sensitive camera with cooled CCD
DIGI	Universal photo & video (1080p) camera
TB-2 SERIES	Tablet PC with integrated camera
EDUCAM SERIES	Multimedia cameras
VC SERIES	CCD videocameras for general purpose





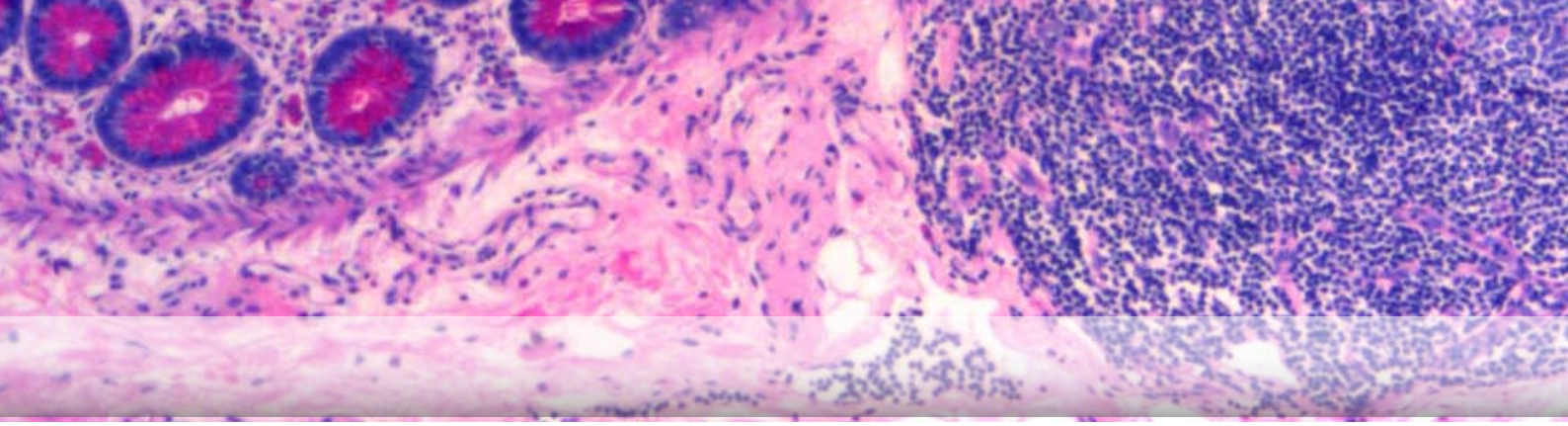
OPTIKAM® Budget Series - USB cameras

OPTIKAM B05	Eyepiece Camera
Sensor	CMOS 1/4"
Resolution	800x600 pixels (0,48 Mpixels)
Frame Rate at Full Resolution	25 frames/sec
Frame Rate at VGA Resolution	30 frames/sec
Optical Format	1/4"
Aspect Ratio	4:3
S/N Ratio	52 dB
Dynamic Range	60 dB
Sensitivity	2,0 V/Lux-second
C-Mount:	No
Adapters for stereomicroscopes	30 and 30,5 mm diameter
Calibration slide	None
System Requirements	Windows XP/Vista/Seven, 32-64 bit, USB port
Software	Optika Vision Lite / OPTIKA MIPro
Capture Features	Continuous auto white balance, continuous auto exposure
Accessories included	1.8 m USB cable, carton box

OPTIKAM B1	C-mount and Eyepiece Camera
Sensor	CMOS 1/,3"
Resolution	1280 x 1024 pixels (1,3 Mpixels)
Frame Rate at Full Resolution	15 frames/sec
Frame Rate at VGA Resolution	30 frames/sec
Optical Format	1/3"
Aspect Ratio	4:3
S/N Ratio	44 dB
Dynamic Range	71 dB
Sensitivity	1,0 V/Lux-second
C-Mount:	Yes
Optical adapter	0,5x (for eyepiece tube)
Adapters for stereomicroscopes	30 and 30,5 mm diameter
Calibration slide	76x24mm micrometric calibration slide
System Requirements	Windows XP/Vista/Seven, 32-64 bit, USB port
Software	Optika Vision Lite / OPTIKA View
Capture Features	Continuous auto white balance, continuous auto exposure
Accessories included	1.8 m USB cable, carton box

OPTIKAM B2	C-mount Camera
Sensor	CMOS 1/3"
Resolution	1600 x 1200 pixels (2 Mpixels)
Frame Rate at Full Resolution	10 frames/sec
Frame Rate at VGA Resolution	25 frames/sec
Optical Format	1/3"
Aspect Ratio	4:3
S/N Ratio	56 dB
Dynamic Range	60 dB
Sensitivity	1,0 V/Lux-second
C-Mount:	Yes
Optical adapter	None
Adapters for stereomicroscopes	None
Calibration slide	76x24mm micrometric calibration slide
System Requirements	Windows XP/Vista/Seven, 32-64 bit, USB port
Software	Optika Vision Lite / OPTIKA MIPro
Capture Features	Continuous auto white balance, continuous auto exposure
Accessories included	1.8 m USB cable, carton box

Special model designed for trinocular microscopes only. This camera does not include any optical adapter for biological microscopes or stereomicroscopes. Especially designed for heavy applications, the Optikam B-2 is very robust and does not need the installation of any driver in your computer.



OPTIKAM® Budget Series - USB cameras

OPTIKAM B3	C-mount and Eyepiece Camera
Sensor	CMOS 1/2"
Resolution	2048 x 1536 pixels (3,14 Mpixels)
Frame Rate at Full Resolution	8 frames/sec
Frame Rate at VGA Resolution	30 frames/sec
Optical Format	1/2"
Aspect Ratio	4:3
S/N Ratio	44 dB
Dynamic Range	71 dB
Sensitivity	1,0 V/Lux-second
C-Mount:	Yes
Optical adapter	0,5x (for eyepiece tube)
Adapters for stereomicroscopes	30 and 30,5 mm diameter
Calibration slide	76x24mm micrometric calibration slide
System Requirements	Windows XP/Vista/Seven, 32-64 bit, USB port
Software	Optika Vision Lite / OPTIKA View
Capture Features	Continuous auto white balance, continuous auto exposure
Accessories included	1.8 m USB cable, carton box

OPTIKAM B5	C-mount and Eyepiece Camera
Sensor	CMOS 1/2,5"
Resolution	2592 x 1944 pixels (5,04 Mpixels)
Frame Rate at Full Resolution	8 frames/sec
Frame Rate at VGA Resolution	30 frames/sec
Optical Format	1/2,5"
Aspect Ratio	4:3
S/N Ratio	40,5 dB
Dynamic Range	60 dB
Sensitivity	1,0 V/Lux-second
C-Mount:	Yes
Optical adapter	0,5x (for eyepiece tube)
Adapters for stereomicroscopes	30 and 30,5 mm diameter
Calibration slide	76x24mm micrometric calibration slide
System Requirements	Windows XP/Vista/Seven, 32-64 bit, USB port
Software	Optika Vision Lite / OPTIKA View
Capture Features	Continuous auto white balance, continuous auto exposure
Accessories included	1.8 m USB cable, carton box

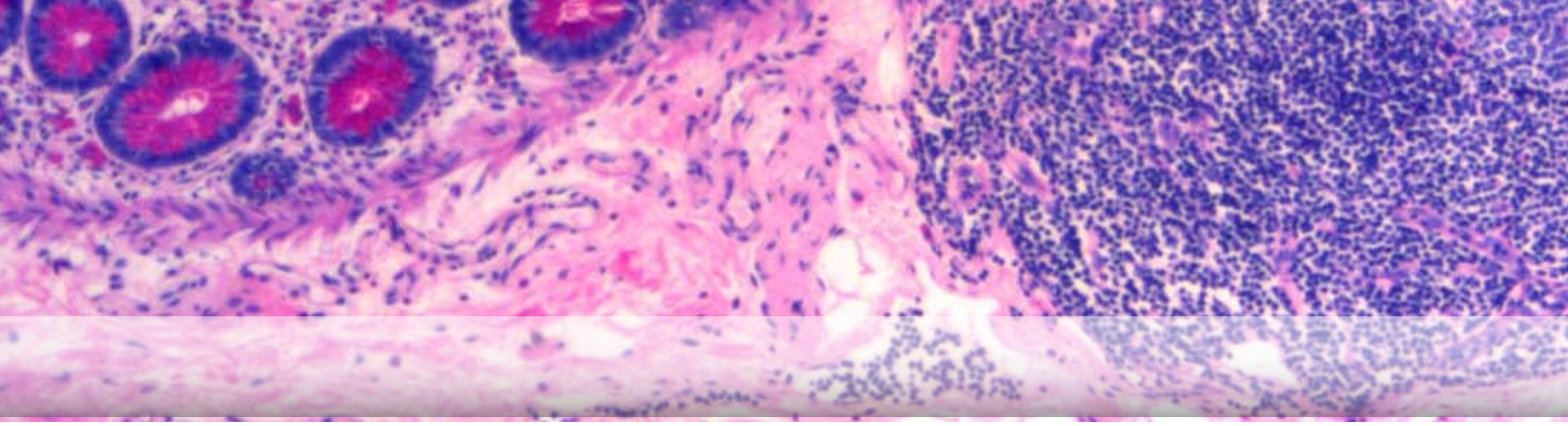
OPTIKAM B9	C-mount and Eyepiece Camera
Sensor	CMOS 1/2,3"
Resolution	3488 x 2616 pixels (9,12 Mpixels)
Frame Rate at Full Resolution	2 frames/sec
Frame Rate at Middle Resolution(1,3Mp)	15 frames/sec
Frame Rate at VGA Resolution	30 frames/sec
Optical Format	1/2,3"
Aspect Ratio	4:3
S/N Ratio	40,5 dB
Dynamic Range	63 dB
Sensitivity	1,0 V/Lux-second
C-Mount:	Yes
Optical adapter	0,5x (for eyepiece tube)
Adapters for stereomicroscopes	30 and 30,5 mm diameter
Calibration slide	76x24mm micrometric calibration slide
System Requirements	Windows XP/Vista/Seven, 32-64 bit, USB port
Software	Optika Vision Lite / OPTIKA View
Capture Features	Continuous auto white balance, continuous auto exposure
Accessories included	1.8 m USB cable, carton box

Hi-Performance cameras with advanced software package

OPTIKAM® PRO Series

C-mount cameras for video and still-image capturing with high performances. These cameras are delivered with our complete OPTIKA VISION SOFTWARE PACKAGE.
LT versions do not include any eyepiece adapter.
Ideal for professional trinocular microscopes.

	OPTIKAM® PRO 3LT	OPTIKAM® PRO 3	OPTIKAM® PRO 5LT	OPTIKAM® PRO 5
Resolution	2048 x 1536 pixels (3.2 Mpixel)		2560 x 1920 (5.0 Mpixel)	
Sensor	CMOS 1/2"		CMOS 1/2,5"	
Pixel Size	3.2 µm x 3.2 µm		2.2 µm x 2.2 µm	
Image Area	6.55 mm x 4.92 mm		5.70 mm x 4.28 mm	
Frame Rate at Full Resolution	12 frames/sec		3 frames/sec	
Frame Rate at Half Resolution	24 frames/sec		12 frames/sec	
Optical Format	1/2"		1/2"	
Aspect Ratio	4:3		4:3	
S/N Ratio	43 dB max		40.5 dB max	
ADC	10 bit		10 bit	
Data Output (Uncompressed Video)	3x8 bit		3x8 bit	
Sensitivity	1.0 V/Lux-second		0.53 V/Lux-second	
System Requirements	Windows XP / Vista 32-64bit / Win 7 32-64bit, USB 2.0 port		Windows XP / Vista 32-64bit / Win 7 32-64bit, USB 2.0 port	
Software	OPTIKA Vision Pro Plus, TWAIN interface, SDK		Optika Vision Pro, TWAIN interface, SDK	
Capture Features	Continuous auto white balance, continuous auto exposure, averaging, subsampling (decimation)		Continuous auto white balance, continuous auto exposure, averaging, subsampling (decimation)	
Optical adapter	None	0,45x with additional ring adapter for stereomicroscopes	None	0,45x with additional ring adapter for stereomicroscopes
Included with the camera	3 m USB cable, 76x24mm micrometric calibration slide, C-mount cap, box		3 m USB cable, 76x24mm micrometric calibration slide, C-mount cap, box	
Max exposure	1 sec		28,9 msec	
Max extended exposure	26 sec		29 msec	

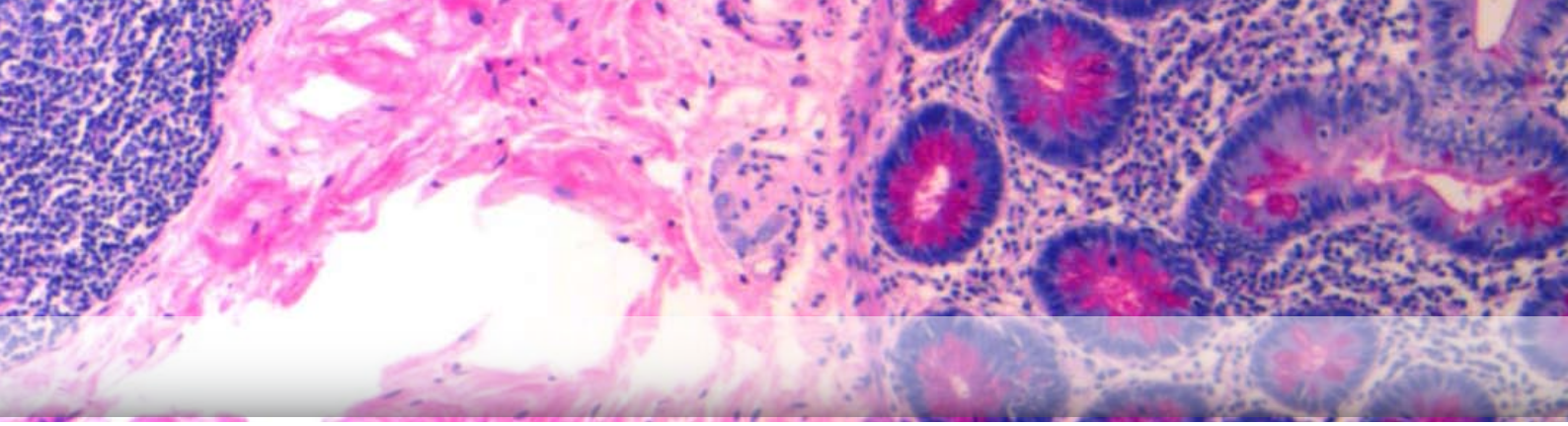


OPTIKAM® Pro Cool 5 - 5 Mpixel cooled CCD camera

A new CCD cooled camera for fluorescence applications

* Scientific-grade CCD chip
* 5 Mega pixels resolution (2580x1944 pixels)
* 12 bit color RGB
* Peltier-cooled to 30° below room temperature
* Very long exposure time for fluorescence imaging
* Anti "amplifier glow" function for long exposure
* CNC aluminum alloy metal case

OPTIKAM Pro Cool 5	CCD Cooled Camera
CCD chip manufacturer, model	Sony, ICX412AQ
CCD scan mode	interline transfer
CCD size	2/3"
Pixels	3.4mm x 3.4mm
G sensitive	280 mV
Resolution	2580H x 1944V
Filter	RGB
C-mount	Yes
Frame Rate at Max Resolution	3 fps (2580x1944)
Frame Rate at VGA Resolution	10 fps (1280x932)
Low-speed readout	Yes
A/D conversion	8/12 bit
Peltier cooling system	30°C below room temperature
Exposure control	Automatic, manual
Exposure time	0.1ms - 9 minutes
Anti "amplifier glow"	Yes
White balance	Automatic, manual
Parameter controls	image size, brightness, gain, exposure time, white balance
Data interface	USB2.0 / 480Mb/s
Dimension	130mm x 111mm x 54mm
System Requirements	Windows XP / Vista 32-64bit / Win 7 32-64bit, USB 2.0 port
Software	Optika View

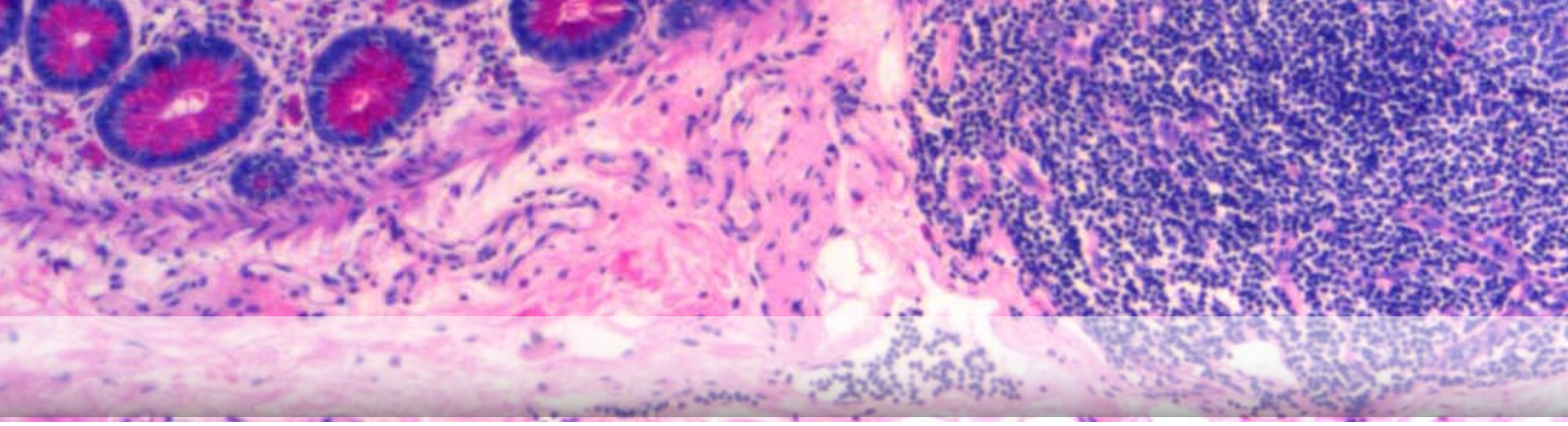


DIGI - Full HD video/photo camera

OPTIKA Microscopes is pleased to introduce a new model of digital camera, fitted with USB connection and AV output for HDTV or TV set with standard resolution. All you need to capture pictures and videos from your microscope or simply from the surroundings is in this 2-in-1 model.
Other advantages of the new DIGI camera are the possibility to record videos and to use it as a standard digital camera, for personal use.
The camera sensor has a resolution of 5MPixels (8Mpixels through interpolation), it is provided with 3X optical zoom and a very bright 2.4" LCD display.
The system also includes specific adapters that allow the use on all microscopes and stereomicroscopes models with diameter of the eyepiece holder of 23mm or 30mm. A complete software will allow you to process, file and work with the captured images.
The camera includes a 2GB SD memory card.

DIGI	Digital Photo and Video Camera
Sensor	5.0 MP 1/2.5" CCD Sensor
Resolution (PHOTO)	8Mp (3200x2400 pixels) 5Mp (2595x1944 pixels) 3Mp (2048x1536 pixels)
Resolution (VIDEO)	1440x1080 (HD 1080p, 30fps) 1280x720 (HD 720p, 60fps) 1280x720 (HD 720p, 30fps) 848x480 (480p, 60fps) 320x240 (QVGA, 30fps)
Lens	3x optical zoom lens
Digital zoom:	4x (2x in 1080p mode)
File format:	JPEG, MOV, WAV
Internal Memory:	32MB
External Memory:	2GB SD card included (up to 32GB SDHC)
LDC display:	2,4"
TV out:	HDTV Component Out, PAL/NTSC system supported
Interface:	USB 2.0
Voice Recorder:	Yes
Microphone:	Internal (stereo), mic jack
Speaker:	Yes
Nightshot:	Yes (both in still image and video modes)
E.I.S.:	Electronic Image Stabilization
C-Mount:	No
Optical adapter	10x (for eyepiece tube)
Adapters for stereomicroscopes	30,0mm diameter
Battery:	Li-Ion rechargeable
Remote Control:	Yes, IR transmission

DIGI

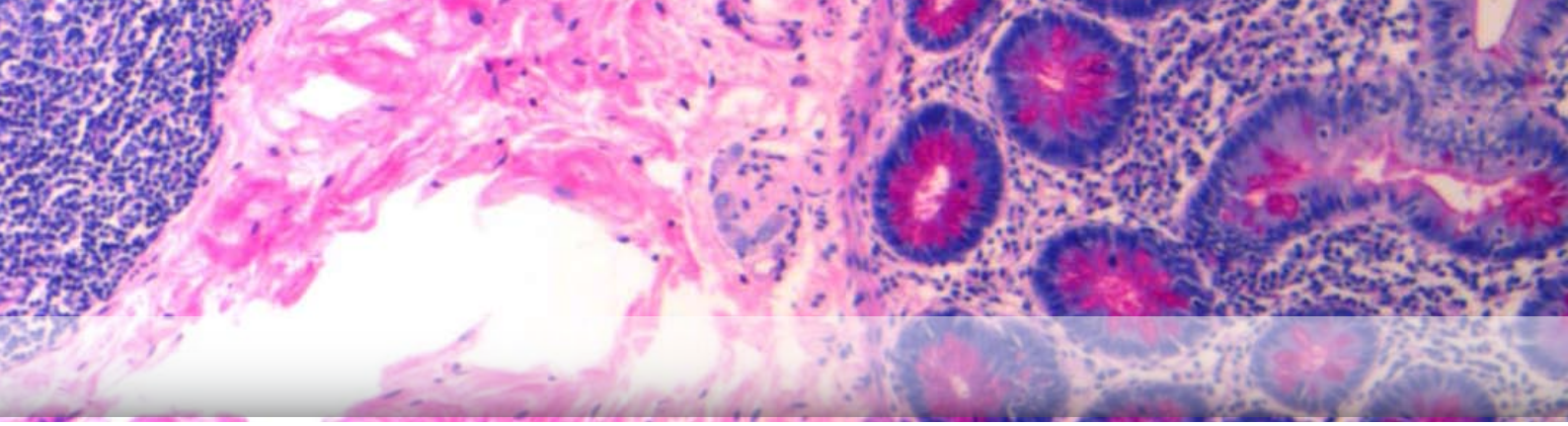


TB-2 Series - Tablet PC with integrated camera

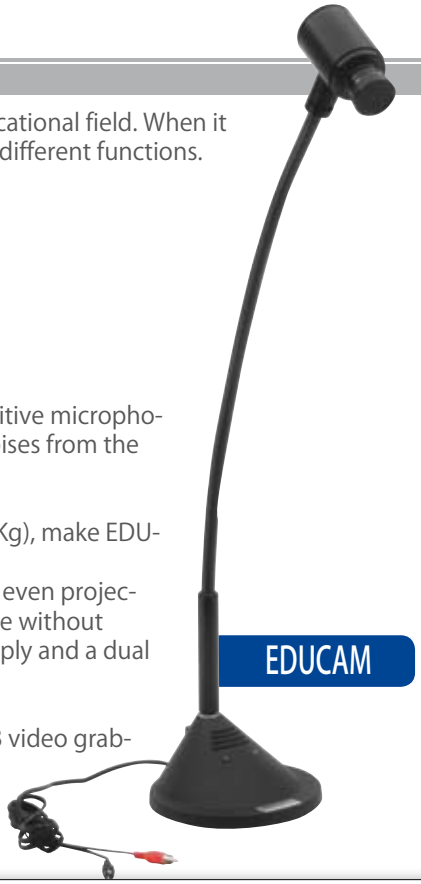
Finally, something new in digital microscopy !
A Tablet PC with 10" LCD touch screen, in combination with a 2Mp C-mount camera:
an universal system wich can be installed on every trinocular microscope.

Tablet PC specifications	TB-2L	TB-2W
PCU	Intel Atom N455 1.66GHz	
Screen	10" Touch	
Hard Disk	16 GB	
RAM	1GB	
Graphics Card	Intel GMA3150	
LAN	Ethernet port	
USB 2.0	3 ports	
VGA output	Yes mini	
W-LAN	Wi-Fi adapter	
Bluetooth	Yes	
SD Card Reader	Yes	
OS	Linux Ubuntu	Windows 7 Home Premium
Image Analysis Software	Image J	Optika Vision Lite / Optika MiPRO
USB Camera specifications		
Sensor	CMOS 1/3"	
Resolution	1600 x 1200 pixels (2 M pixels)	
Frame Rate at Max Resolution	10fps	
Frame Rate at VGA Resolution	25fps	
S/N Ratio	56 dB	
Dynamic range	60 dB	
Sensitivity	1,0V/lux-second	

TABLET



EDUCAM® Series - Multimedia cameras



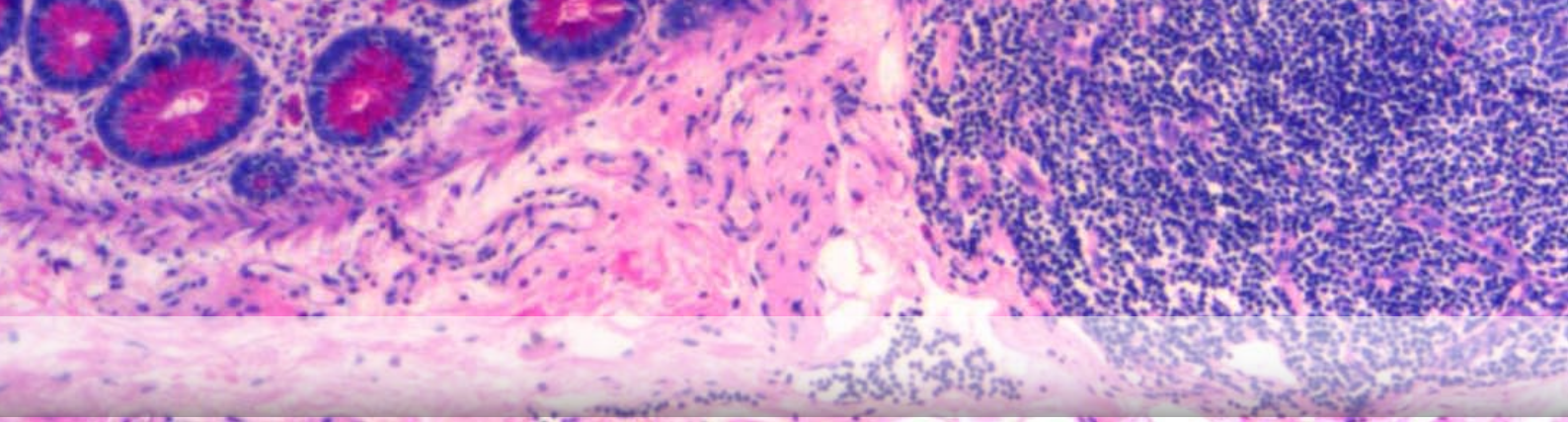
The EDUCAM® video camera is especially designed to meet the various requirements in the educational field. When it is connected to a professional monitor or simply to a TV set, EDUCAM® is able to carry out many different functions.
It can be used as an episcope, for the reproduction of
- texts, documents, photographs
- to enlarge small objects, insects, minerals
- for video-microscopy, connected to microscopes used in biology or to stereomicroscopes
- as an overhead projector, for the projection of drawings
- as a camera for teleconferences, assemblies, meetings
- as a camera for filming, with the help of a video recorder.

Its ultra-high sensitivity enables to record clearly even in low-light conditions.
The special lens enables you to focus from 0,76 cm, up to an infinite distance. An extremely sensitive microphone (only on Multimedia models), records the teacher's voice during the lesson, or sounds and noises from the surrounding area, that can be heard via the TV itself, or via a separate amplifying system.
The microphone can be switched off if required.
The special 50-or 65-cm flexible arm (12mm dia.) and the heavy weight of the base (approx. 2.7 Kg), make EDUCAM® versatile, sturdy and stable at the same time.
The CCD camera is placed on the end of a flexible arm that can be safely twisted in any position, even projecting from the base, without affecting the system stability. A special joint allows the head to rotate without damaging the wires inside the flexible arm. All models are equipped with an external power supply and a dual adapter for video-microscopy (for biological and stereo microscopes).

For the connection to a PC, a USB video grabber is available as option (see next page, CONV-USB video grabber). In the model EDUCAM USB, the video grabber is built-in.

Technical Features

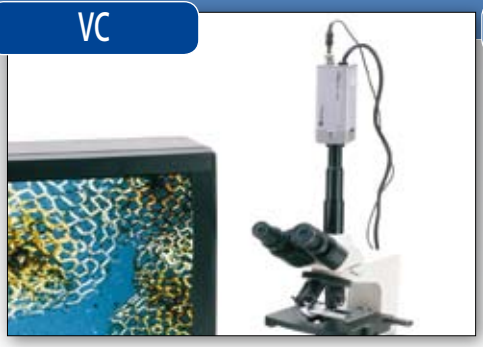
	MULTIMEDIA 4083	MULTIMEDIA PRO 4083.1	STUDENT 4083.2	STUDENT PRO 4083.3	MIC 4083.5	USB 4083.4
CCD element	1/3"	1/3"	1/3"	1/3"	1/3"	1/3"
Resolution (TV lines)	420	420	420	420	420	420
Total pixels	298.000	298.000	298.000	298.000	298.000	298.000
Signal/noise ratio	>48 dB	>48dB	>48dB	>48dB	>48 dB	>48dB
Sensitivity (lux/F:1.2)	0.8lux/F1.2	0.8lux/F1.2	0.8lux/F1.2	0.8lux/F1.2	0.8lux/F1.2	0.8lux/F1.2
Electronic shutter	yes	yes	yes	yes	yes	yes
Automatic gain control	yes	yes	yes	yes	yes	yes
White balance (auto)	yes	yes	yes	yes	yes	yes
Video signal	PAL (NTSC opt.)	PAL (NTSC opt.)	PAL (NTSC opt.)	PAL (NTSC opt.)	PAL (NTSC opt.)	PAL (NTSC opt.)
USB output	-----	-----	-----	-----	-----	yes
Digital resolution	-----	-----	-----	-----	-----	640x480 pixels
Working distance	>0,76 cm	>0,76 cm	>0,76 cm	>0,76 cm	>0,76 cm	>0,76 cm
Objective	8 mm	8 mm	8 mm	8 mm	8 mm	8 mm
Magnification	> 90x	> 90x	> 90x	> 90x	> 90x	> 90x
Microphone	yes	yes	-----	-----	-----	yes
Audio signal	analogic	analogic	-----	-----	-----	analogic
Voltage	12Vdc	12Vdc	12Vdc	12Vdc	12Vdc	12Vdc
Power adapter 230/12Vdc	included	included	included	included	included	included
Flexible arm length	50 cm	65 cm	50 cm	65 cm	-----	65 cm
Base diameter	17 cm	17 cm	17 cm	17 cm	-----	17 cm
Weight	3,4 Kg	3,5 Kg	3,3 Kg	3,4 Kg	0,4 Kg	3,5 Kg
Microscope adapters	included	included	included	included	included	included
System Requirements					Windows XP, VISTA,Seven 32-64 Bit	



VC Series - CCD Cameras

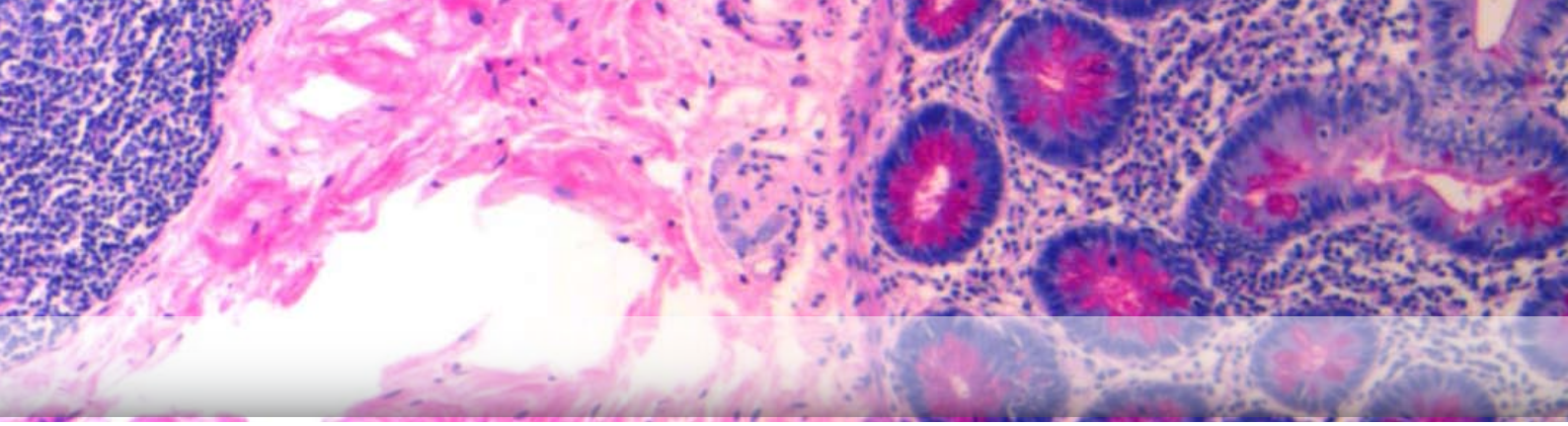
VC-01

VC



VC-05

CONV-USB



VC Series - CCD Cameras

Videomicroscopy system composed by a colour CCD TV camera, complete with Bio & Stereo Microscope adapter tube, integrated power supply unit, cables and manuals.

VC-01	Videomicroscopy system
Sensor	CCD SONY sensor 1/3"
Horizontal Resolution	420 TV lines (PAL)
Picture elements	500[H]x582[V]
Video output	BNC VBS 1.0Vp-p, 75 Ohm
C-Mount	C/CS
Sensitivity	0.5lux/F=1.2
Auto white balance	Yes
Auto gain control	Yes
Load current	150mA
Dimension	60x50x145mm - Weight 400g
Operating temperature	-10° to + 50°

VC-04	Videomicroscopy system
Sensor	CCD SONY sensor 1/3"
Horizontal Resolution	480 TV lines (PAL)
Picture elements	752[H]x582[V]
Video output	BNC VBS 1.0Vp-p, 75 Ohm
C-Mount	C/CS
Sensitivity	0.8lux/F=1.2
Auto white balance	Yes
Auto gain control	Yes
Load current	150mA
Dimension	60x50x145mm - Weight 400g
Operating temperature	-10° to + 50°

Colour CCD TV camera for C-Mount connection, complete with cables, SCART adapter & manual.

VC-02	Videomicroscopy system
Sensor	CCD SONY sensor 1/3"
Horizontal Resolution	420 TV lines (PAL)
Picture elements	500[H]x582[V]
Video output	BNC VBS 1.0Vp-p, 75 Ohm
C-Mount	C/CS
Sensitivity	0.5lux/F=1.2
Auto white balance	Yes
Auto gain control	Yes
Load current	150mA
Dimension	60x50x145mm - Weight 400g
Operating temperature	-10° to + 50°

VC-03	Videomicroscopy system
Sensor	CCD SONY sensor 1/3"
Horizontal Resolution	480 TV lines (PAL)
Picture elements	752[H]x582[V]
Video output	BNC VBS 1.0Vp-p, 75 Ohm
C-Mount	C/CS
Sensitivity	0.8lux/F=1.2
Auto white balance	Yes
Auto gain control	Yes
Load current	150mA
Dimension	60x50x145mm - Weight 400g
Operating temperature	-10° to + 50°

VC-05 Eyepiece CCD camera

Simple eyepiece camera with CCD sensor. 340 TV Lines (PAL).

CONV-USB Video Grabber

Analogic to Digital signal converter for PC.

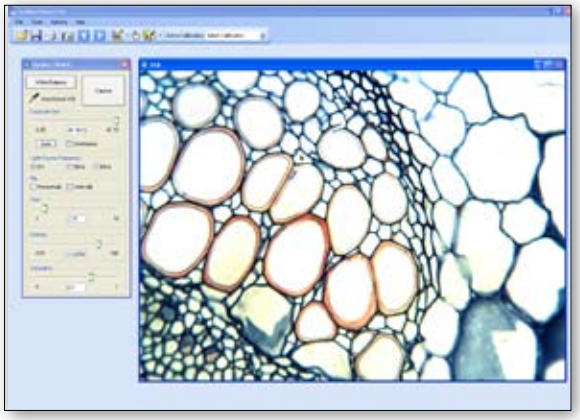
Real time video capture from camcorder, VCR or camera. User friendly software easily stores and manages images & videos. Real time/full size Video capture window. The CONV-USB video grabber comes with a CD with drivers for Windows XP, Vista and Seven 32-64bit.

OPTIKA - SOFTWARE SUITE

OPTIKA VISION® LITE is a software developed by Optika Microscopes with the main purpose to be a handy and simple tool for our customers using our Optikams and other digital microscope cameras. It has a simple user interface and can be used for image acquisition, line measurements and documentation. It is available in seven languages: English, Italian, French, Spanish, German, Swedish and Polish.

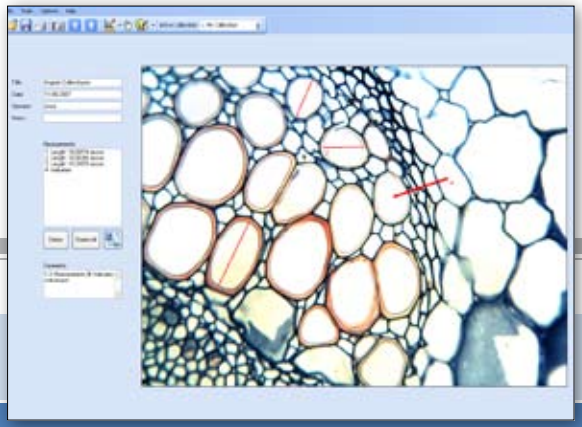
Image and video Acquisition

You can capture still images using a live preview that
allows to precisely focus your image and
change image parameters in order to have a perfect final result.
The image can be saved separately in BMP, JPG or TIFF formats.
It is also possible to import saved images from other sources.
Moreover:
- Image stacks acquisition (adjustable time steps)
- Square or round grid on live preview
- Video acquisition function included.



Measurements

Linear in-scale measurements can be made in any unit you like, using a simple calibration and measurement tool.
The data can be exported to a spreadsheet document for further elaboration.
There is also the possibility to indicate special objects in the image and to write comments.

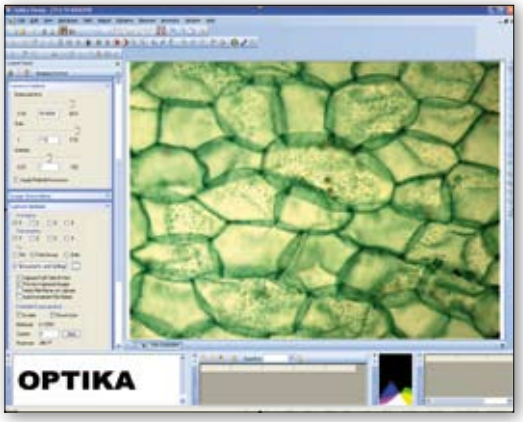


Documentation

A report can be generated simply by printing the document on a normal printer or to a PDF. The document can be personalized with your own logo.

OPTIKA - SOFTWARE SUITE

OPTIKA VISION® PRO is a new generation of microscope image analysis instruments, especially developed for our Optikam Pro series, which contains various tools for processing and analysis of digital microscope images. It includes powerful tools for image capturing, adjusting, operating and measuring. You have also the possibility to create your own database for easy organisation and storage of your images.



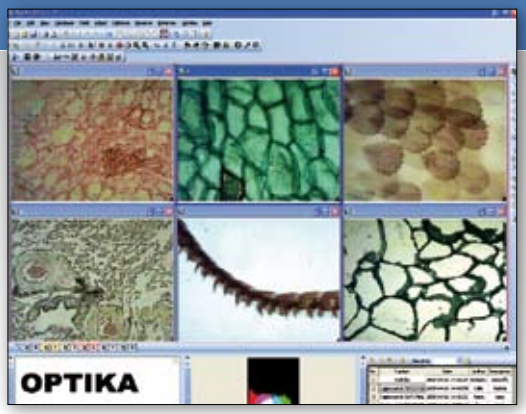


Image Acquisition

Optika Vision® Pro allows still image acquisition with several possibilities to control the image output according to your needs. There are functions such as white balance, automatic exposure, frame average, sub-sampling, hue, saturation and intensity controls, to mention a few.

Post Elaboration and Measurements

Optika Vision® Pro also offers the possibility to make various types of enhancements and adjustments of the captured image and calibrated measurements of lines, angles and areas. You can also perform manual counting and measure the light density of your acquired image.

Organize your work

For easy storage and fast upload you can organize your images into a database where it is possible to search for the images using keywords.
In Optika Vision® Pro you can also arrange images into groups in order to combine them calculate the average or create a multi-focus composition.

OPTIKA - SOFTWARE SUITE

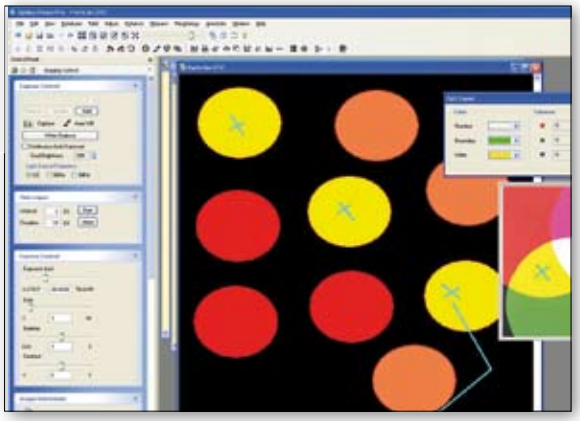
OPTIKA VISION® PRO PLUS

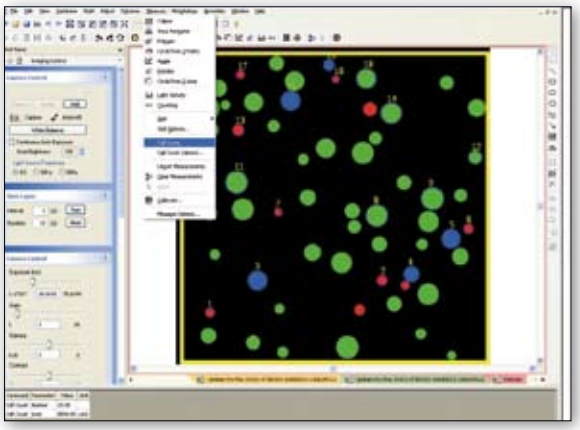
is a software version just for your PRO3 camera which, having a powered internal clock, allows a faster frame rate and additional useful functions such as:

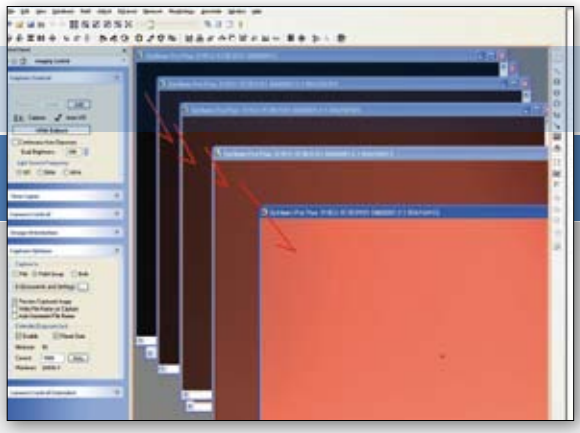
- exposure time up to 1000msec.
- snap exposure time up to 26 sec, very useful when the light source is weak.
- automatic live image brightness on the screen.

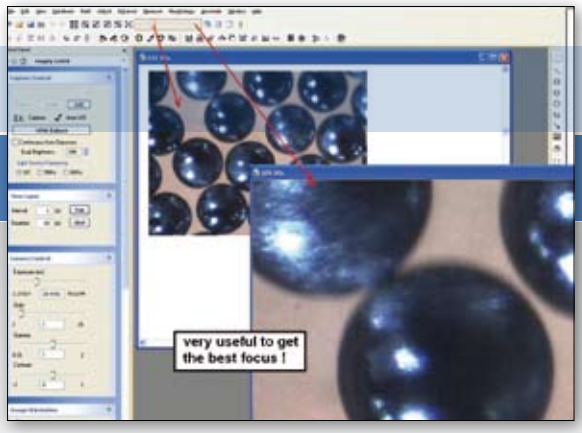
and furthermore :

- a simple to use live zoom bar, very helpful to get the better focusing point.
- automatic cells counting (based on RGB colours)
- direct measurement on live view









OPTIKA - SOFTWARE SUITE

OPTIKA VIEW is a new generation of microscope image analysis instruments, especially developed for our Optikam Budget and Pro Cool series, which contains various tools for processing and analysis of digital microscope images. It includes powerful tools for image capturing, adjusting, operating and measuring.

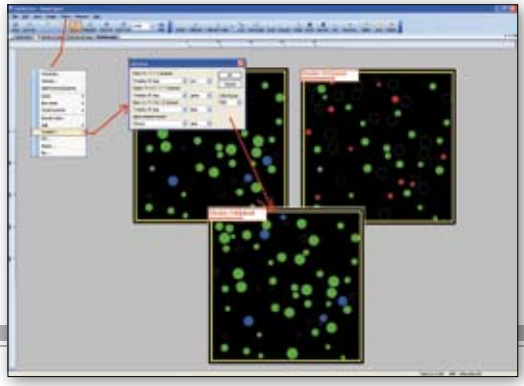
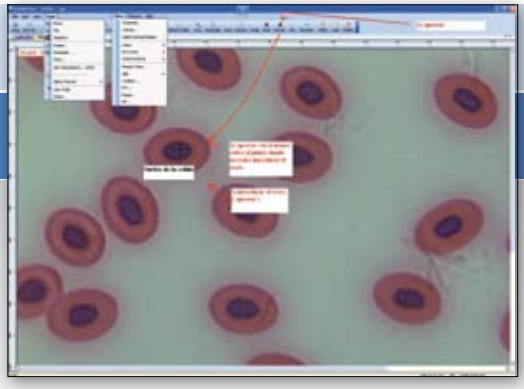
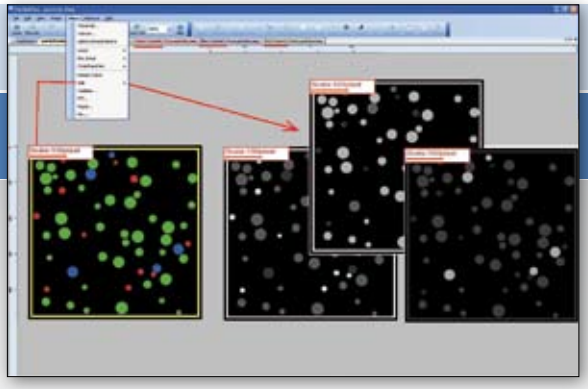


Image Acquisition

Optika View allows still image acquisition with several possibilities to control the image output according to your needs. There are functions such as white balance, automatic exposure, frame average, sub-sampling, hue, saturation and intensity controls, to mention a few.





OPTIKA - SOFTWARE SUITE

OPTIKA MIPro

OPTIKA MiPro is a new generation of microscope image analysis instruments, especially developed for our Optikam B0.5 and B2 cameras, which contains simple tools for processing and analysis of digital images, It includes powerful tools for image capturing, adjusting, operating and measuring.

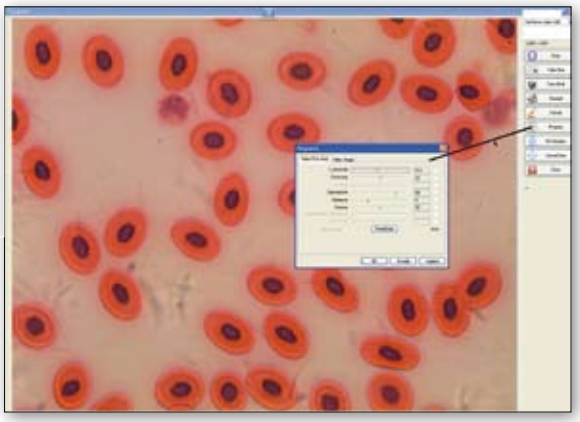
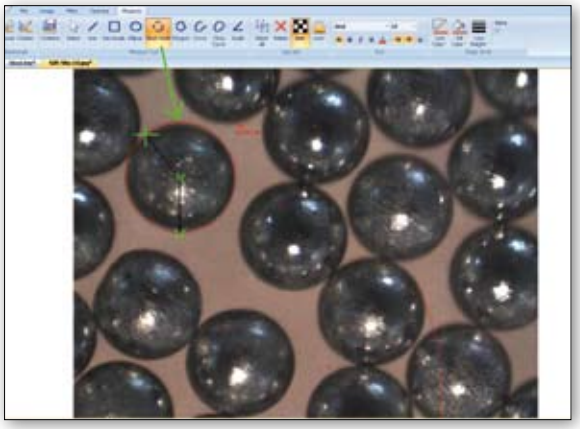
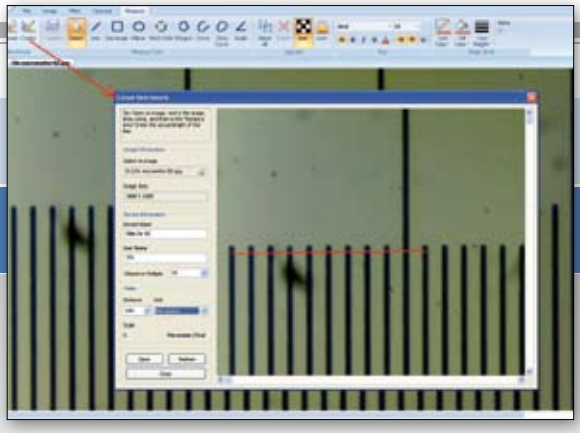
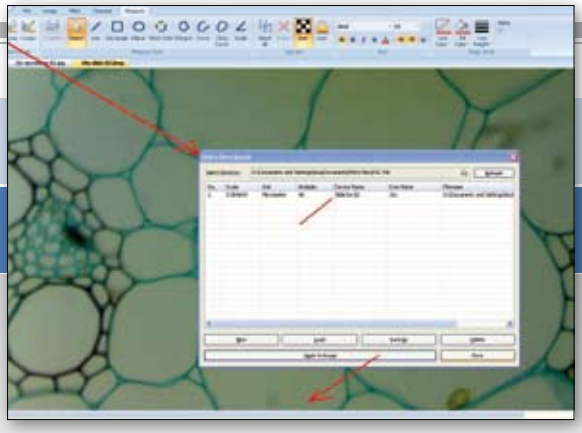


Image Acquisition

Optika MiPro allows still image acquisition with several possibilities to control the image output according to your needs. There are functions such as white balance, automatic exposure, frame average, sub-sampling, hue, saturation and intensity controls, to mention a few.







OPTIKA - SOFTWARE SUITE

FREEWARE

The Optika Vision® software package also contains a bundle of imaging, video and image analysis software that are freely available from the Internet. They are provided free of charge, according to the original license, as an aid in the use of your Optika product.

Emamcapture

AMCap is a small yet fully functional video capture and preview application compatible with Microsoft™ DirectShow (formerly ActiveMovie, hence the name). It is based on the sample AMCap source code from the Microsoft DirectX 9 SDK.

GIMP

GIMP is the GNU Image Manipulation Program. It is a freely distributed advanced software for tasks such as photo retouching, image composition and image authoring. It works on many operating systems, in many languages.

Combine Z

This small software combines pictures to increase depth of focus.

Image Tool (not for Windows 7)

ImageTool is an advanced image processing and analysis program for Windows. It can acquire, display, edit, analyze, process, compress, save and print greyscale and colour images. It can read and write over 22 common file image formats.
Image analysis functions include dimensional (distance, angle, perimeter, area), automatic (or manual) object/cell counting and full analysis functions, and greyscale measurements (point, line and area histogram with statistics). ImageTool supports standard image processing functions such as contrast manipulation, sharpening, smoothing, edge detection, median filtering and spatial convolutions with user-defined convolution masks.
ImageTool also has built-in scripting capabilities that allow the user to record repetitive tasks and playback saved scripts to automate image analysis. ImageTool was designed with an open architecture that provides extensibility via a variety of plug-ins for example image acquisition using either Adobe Photoshop plug-ins or Twain scanners is built-in.
ImageTool provides for geometric transformations and magnification up to four levels. All analysis and processing functions are available at any magnification factor.
ImageTool also provides for image annotation with text, arrows, rectangle, ellipses and polygon.

MBF ImageJ

ImageJ is a public domain Java image processing program that runs on any computer with a Java 1.4 or later virtual machine.
It can display, edit, analyze, process, save and print 8-bit, 16-bit and 32-bit images of various image formats. It supports "stacks", a series of images that share a single window. It is multithreaded, so time-consuming operations such as image file reading can be performed in parallel with other operations.

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REFRACTOMETERS AND POLARIMETERS

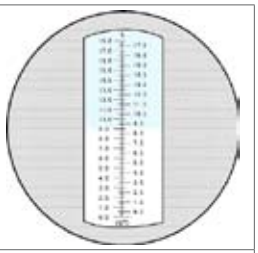
Hand and bench refractometers and polarimeters

REFRACTOMETERS AND POLARIMETERS

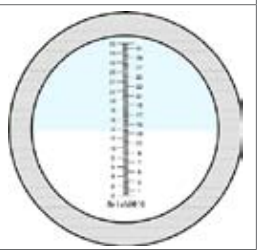
Refractometers and polarimeters

Hand Refractometers

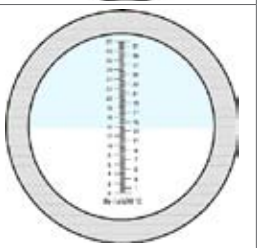
HR-110 Hand refractometer, 0-18%
Measuring range: 0-18% Brix
Resolution: 0.1% Brix
Without ATC



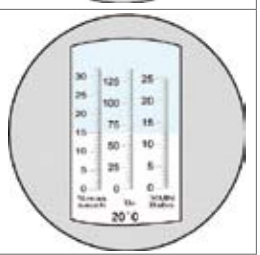
HR-120 Hand refractometer, 0-32%
Measuring range: 0-32% Brix
Resolution: 0.2% Brix
Without ATC



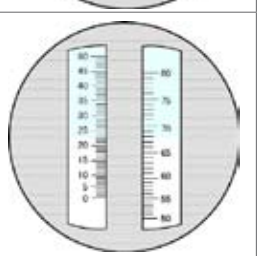
HR-130 Hand refractometer, 0-32% ATC
Measuring range: 0-32% Brix
Resolution: 0.2% Brix
With ATC
Compensation temperature range: 10°C-30°C



HR-140 Hand refractometer, 0-32% ATC, triple scale
Measuring range: 0-32% Brix, 0-140° OE (Oechsle), 0-40° Babo (KMN)
Resolution: 0.2% Brix, 1% OE, 0.2° Babo
Without ATC

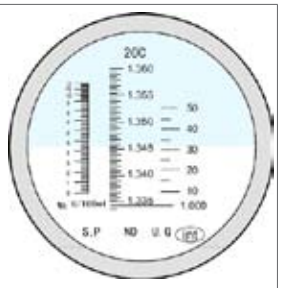


HR-150 Hand refractometer, 0-80%, double scale
Measuring range: 0-80% Brix
Resolution: 1% Brix
Without ATC



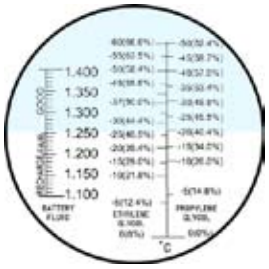
HR-160 Hand refractometer for urine and proteine

Measuring range: Serum Protein 0-12g/dl, Specific Gravity 1.000-1.050sg,
Refractive Index: 1.330RI-1.360RI
Resolution: Serum Protein 0.2g/dl, Specific Gravity 0.005sg, Refractive Index 0.0005RI.
Without ATC



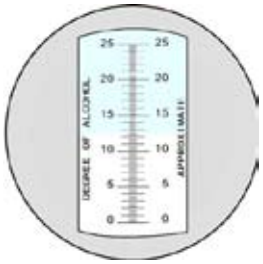
HR-170 Hand refractometer, for battery, antifreeze

Measuring range: Ethylene Glycol -60°C (66.6%)-0°C (0%),
Propylene Glycol, -50°C(62.4%)-0°C (0%),
Battery 1.100-1.400sg
Resolution: Ethylene Glycol 5°C, Propylene Glycol 5°C, Battery 0.01sg. Without ATC



HR-180 Hand refractometer for wine and grape

Measuring range: Alcohol° 0-25%
Resolution: Alcohol° 0.2%. Without ATC



HR-190 Hand refractometer, 0-28%, for salinity

Measuring range: Salinity: 0-28%
Resolution: Salinity: 0.2%. With ATC.
Compensation temperature range: 10°C-30°C

HRD-300 Digital refractometer 0-45%,

Brix Measuring range: 0-45% Brix Resolution: 0.1% Brix
Automatic Temperature Compensation. Temperature range: 0-40°C, 32-104°F
Precision of temperature measurement: 1°C, 2°F Temperature resolution 0.1°C
Operation temperature0-35°C, 32-90°F Storage temperature: 0-50°C, 32-122°F
Dimension and weight: 185x59x45mm, 230g Power Supply: 1 battery 9v Alarm of Low Voltage

HRD-400 Digital refractometer 0-28%, for salinity

Measuring range: 0-28% Resolution: 0.1%
Automatic Temperature Compensation. Temperature range: 0-40°C,
32-104°F Precision of temperature measurement: 1°C, 2°F
Temperature resolution 0.1°C Operation temperature0-35°C, 32-90°F
Storage temperature: 0-50°C, 32-122°F
Dimension and weight: 185x59x45mm, 230g Power Supply: 1 battery 9v

HRD-500 Digital refractometer, for urine, serum and DI

Measuring range: Urine SP.G 1.000-1.050, Serum P. 0-12g/dl,
Refractive Index 1.3330-1.3900 Resolution: Urine SP.G 0.001, Serum P. 0.1g/dl,
Refractive Index 0.0001 Automatic Temperature Compensation. Temperature range: 0-50°C, 32-122°F
Precision of temperature measurement: 1°C, 2°F Temperature resolution 0.1°C
Operation temperature0-35°C, 32-90°F
Storage temperature: 0-50°C, 32-122°F
Dimension and weight: 185x59x45mm, 230g Power Supply: 1 battery 9v

Refractometers and polarimeters

2WAJ ABBE BENCH REFRACTOMETER

Main prism: horizontal Secondary prism: fitted on a hinge
Refraction index scale: Nd 1.300 – 1.700
Precision: Nd ± 0.0003
Division: Nd 0.0005
Sugars scale: 0-95% from Nd 1.300 – 1.530
Precision: 0-50% = 0.2%; 51-95% = 0.1%
Division: 0,25%
Thermometer scale: 0°C - 70°C, div. 1°C
Weight: 4 Kg Size: 140 x 100 x 235 mm

2WAY

POL-1 BENCH POLARIMETER

Circular polarimeter using Nicol prisms, with monochrome light source (589.3 Nm sodium bulb). Measurement range: ± 180°
Precision: 0.05% Division: 1°
Magnification: 3x Eyepiece: with fine focusing
Stabilisation time: 5 mins. approx.
Polarimeter tubes: 100 mm and 200 mm
Size: 510 x 135 x 380 mm Power supply: 230V/50Hz, 30W

Replacement parts for POL-1 polarimeter:

POL-1.1	Sodium bulb
POL-1.2	100 mm polarimeter tube
POL-1.3	200 mm polarimeter tube

POL-1

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